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┌─────── STUDENT REPORT ───────┐
MAXHELP: NEEDS ASSESSMENT IN THE
MONTGOMERY COMMUNITY
Major Ronald R. Handley
Major Kenneth L. Jackson, Jr.
Major Phillip E. Ruter   84-1155
└─ *"insights into tomorrow"* ─┘

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TITLE MAXHELP: NEEDS ASSESSMENT IN THE MONTGOMERY COMMUNITY

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Presents the results of a needs assessment survey conducted in Montgomery, Alabama. Parents, employers, and educators were surveyed to determine if Maxwell's MAXHELP program could help increase scientific and technological education of Montgomery area youth.

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PREFACE

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ABOUT THE AUTHOR

Major Ronald R. Handley is from Athens, Ohio where he graduated from Ohio University with a bachelor's degree in Business Management in 1969. He was commissioned through the Reserve Officer Training Corps program on 7 June 1969. Upon graduation, Major Handley attended Undergraduate Pilot Training at Moody AFB, Georgia. Pilot training was followed by tours in the B-52 aircraft at McCoy AFB, Florida; Wright-Patterson AFB, Ohio; and Castle AFB, California. During this time, Major Handley completed Squadron Officers School in residence, the Air Command and Staff College non-resident seminar program and received his Masters Degree in Management from Central Michigan University. Major Handley has over 3,000 flying hours with 197 combat missions in the B-52 in Vietnam. He worked extensively in developing education and training requirements as a curriculum development manager for B-52 aircrew training while at Castle AFB. Major Handley served as a Training Plans Officer, Executive Officer for the Director of Training, and Executive Officer for the Deputy Chief of Staff, Operations at Headquarters Strategic Air Command prior to attending the 1984 class of Air Command and Staff College.

Major Kenneth L. Jackson, Jr., from De Land, Florida, graduated from Ohio University in 1970 with a BSEE (cum laude), and received his commission from the ROTC program as a distinguished graduate. After technical training at Chanute AFB, Illinois, he served as a Minuteman maintenance officer and Wing staff electrical engineer at Grand Forks AFB, North Dakota from 1970 until 1974. He was assigned to the Space and Missile System Organization (SAMSO) at Norton AFB, California as project officer for the Minuteman ground electronics equipment. In 1976 he entered the Air Force Institute of Technology (AFIT) resident master's program at Wright-Patterson AFB, Ohio and received the MSEE as a distinguished graduate. From 1978 to 1983, he was project officer for the Peacekeeper ICBM in the Ballistic Missile Office (BMO) at Norton AFB, California. Major Jackson is a graduate of the Air Command and Staff College, class of 1984.

Major Philip E. Ruter, originally from Louisville, Kentucky, now calls Wichita Falls, Texas home. Major Ruter enlisted in the Kentucky Air National Guard in January 1964 at which time he completed airman basic training and the Accounting and Finance specialist course where he was a distinguished graduate. In 1968 he was recalled to active duty and was assigned to Sewart Air Force Base, Tennessee. A year later he was accepted into the Airman Education and Commissioning Program and was sent to the University of Tennessee for completion of his bachelor's degree. He graduated from the University of Tennessee in 1970 with honors and the degree of Bachelor of Science in Business Administration-Accounting. He next attended Officer Training School from which he received his commission

and recognition as a distinguished military graduate. From OTS he served tours in the Accounting and Finance career field at Wright-Patterson Air Force Base, Ohio and Kadena Air Base, Japan. In 1976 he served a one-year tour in the Pentagon as a budget analyst on the Air Staff Training Program. From the Pentagon he went to Ramstein Air Base, Germany as the Accounting and Finance Officer and in 1981 to Hellenikon Air Base, Greece as the Base Comptroller. During his tour in Greece, he completed course requirements for the degree of Master of Science in Business Administration from Troy State University. He completed Squadron Officer School by correspondence in 1974 and the Air Command and Staff College non-resident seminar program in 1983. Major Ruter is also a graduate of the Air Command and Staff College resident program, class of 1984.

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AUTHOR(S)
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MAJOR KENNETH L. JACKSON, USAF
MAJOR PHILIP E. RUTER, USAF

TITLE   MAXHELP: NEEDS ASSESSMENT IN THE MONTGOMERY COMMUNITY

I. <u>Purpose:</u> To conduct a local community needs assessment to determine ways in which Air Force Base Activities, facilities, equipment, and personnel might be most effectively employed to help local community educators in improving scientific and technological education of local youth

II. <u>Problem:</u> The United States Air Force introduced an initiative—"Project Technology 2000" aimed at elevating the scientific and technical literacy of America's youth. Air University initiated a program called MAXHELP (Maxwell-Gunter Help Educate for Local Progress) in support of the Air Force program. MAXHELP is aimed at developing projects to aid youth in Montgomery, Alabama and the surrounding area. Several projects have been started; however, a needs assessment of the area has not been accomplished. This report surveys the parents and employers of Montgomery to identify the needs of the community as they see them. Combining the results of this survey with the Air War College survey of local educators gives a total needs assessment of the Montgomery area as seen by the parents, educators, and employers. These results should help MAXHELP coordinators refine current and future activities to the actual needs of the community.

III. <u>Discussion:</u> The basis of the survey was a questionnaire developed to identify community needs. Questions one through eleven covered demographic data for parents and employers. The same questions on the Air War College survey covered

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demographic data for the educators surveyed. Questions twelve through sixty-four on both surveys required respondees to identify areas they felt would least/most be needed to increase scientific and technological literacy in Montgomery area youth. The survey. of parents and employers also included ten questions relating to the use and importance of computers in today's education. The last portion of both surveys allowed for comments by the respondents to identify activities, facilities, services, and equipment the Air Force might provide. The community of the Montgomery area was very supportive of the survey by returning 33.3% of the surveys. Thus, these survey results are representative of the population. Although there are some differences between the surveys returned by the educator group compared to the parents and employers, the importance of computer training, tutors, and science-related activities are most desired by the community. Respondent write-in comments addressed many varied areas. All unedited comments are in Appendices F, G, and H. Primary items addressed were use of AU Library and facilities, guest speakers/lectures, and computer training and use.

IV. <u>Conclusion:</u> Montgomery parents and employers believe there is a need for the vast majority of items presented by this survey. The role of the computer and computer training rated high in all areas. Comparison with the AWC survey of local educators highlighted several areas of interest. Of these, computer training and tutors in selected scientific fields were addressed.

V. <u>Recommendations:</u> The purpose of this report was to conduct a needs assessment of the Montgomery community for MAXHELP coordinators. The needs identified in this report can be used by the MAXHELP program coordinators to implement program initiatives as resources become available.

Chapter 1

INTRODUCTION

This research report was initiated at the request of Air University and is in direct support of the Air University Project MAXHELP (Maxwell-Gunter Help Education for Local Progress). The purpose of the project was to conduct a local community educational needs survey to determine ways in which Air Force military personnel, facilities, and equipment at Maxwell and Gunter Air Force Bases might be most effectively employed to help local community educators in scientific and technological education.

Work on this research was begun in mid December 1983 when it was learned that the Air War College research team was only able to complete a portion of the total community needs assessment. The AWC team conducted an extensive survey of the educators in the local area and documented their results in their report titled "MAXHELP Local Community Educational Needs Survey." This report covers the investigation into the two other segments of the community: parents and employers. A combined analysis of the responses of parents, employers, and educators is included in chapter three of this report. The method of sampling and the confidence levels of the sampling techniques will be covered in chapter two.

The MAXHELP Project is an Air University sponsored program to assist the local schools in scientific and technological education. The program was developed in response to a national concern over the dwindling number of young people entering scientific and technological study areas compared to the perceived need in the future. The Secretary of the Air Force has recently taken a strong position advocating community support initiatives to improve instruction in science and technology at the primary and secondary school levels. To help alleviate the problem in the Montgomery area and to support the Air Force guidance, the MAXHELP program was developed.

The MAXHELP program has four stated purposes. They are:

a. Increase scientific and technological literacy throughout Montgomery and surrounding areas.

b. Assist local community educators and trainers in their educational and instructional efforts.

c. Support private sector, academic, and local government agencies in educational planning and programming.

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d. Broaden the pool of well-prepared youth for potential science, engineering, and high technology careers.

The results of this research project will assist the MAXHELP program coordinators in meeting all four purposes by providing reliable data that represents the consensus of opinion of parents and employers in the local area.

The MAXHELP booklet, published on 6 September 1983, lists eight objectives of the program. One of the objectives was to "Conduct a systematic analysis (sampling) of local community scientific and technological education needs and determine ways in which military personnel, facilities, and equipment might be most effectively employed to help local community educators." This research project in conjunction with the Air War College Team's research fulfills that objective.

The survey form used to canvass parents and educators was similar to the one used by the AWC team for educators. To make the results of both projects compatible, only minimum changes were made. Questions one through eleven of the AWC survey dealt with demographic data associated with educators; these questions were changed to cover similar demographic data for parents and employers. Questions 12 through 64 are unchanged. At the end of the survey, 10 additional questions were added that solicit responses relating to computers and the local school system in general. A copy of the revised survey is included in this report at Appendix A.

CHAPTER 2

SAMPLING METHODOLOGY

The goal of the sampling methodology was to arrive at a set of responses that is representative of the opinions of local parents and employers. In developing the methodology the following were considered: the size of the total population, a sampling method that would be as random as possible, expected responses to the distributed surveys, and a desired confidence level and precison level in the results. The surveys were distributed to three categories of potential respondents: employers, parents of public school students and parents of private school students. For reliability, a 98% confidence level with a 5% precision level was set as the minimum acceptable. All sampling was planned with these goals in mind.

Employers were surveyed on virtually a 100% basis. A list of businesses was obtained from the Montgomery Chamber of Commerce which contained 1,071 names. Each business was mailed a survey addressed to the head of the firm. The package contained the survey, an answer sheet, a letter of explanation, and a franked self-addressed envelope for returning the completed survey. The 100% surveying of employers was chosen to insure that the goals for confidence level and precision level were met. Actual responses to the survey from employers was 21.1% with a corresponding confidence level and precision level of 90% and 5% respectively.

Parents of public school students were surveyed on a sampling basis. The target population chosen was the parents of Montgomery County students in grades 1 through 12. The total population of students in the school system at the time of the survey was 32,272. Applying the 98% confidence level and 5% precision level criteria to the formula in Appendix B revealed that a total of 532 responses was necessary. Because the survey was to be conducted on a voluntary basis, responses were not expected to be greater than 25% and could be as low as 15%. Consequently, a sample size of 3000 was chosen. The next step was to distribute the surveys to the parents on a random basis. The subject was discussed with the board of education who agreed to distribute and collect the surveys, provided that all schools be included in the sample. As a result, 3000 surveys were distributed to the schools prorated on the basis of student enrollment. Appendix C shows enrollment and survey distribution data. This amounted to a sampling in each school of just under 10%. The surveys were sent through the school board to the principals with instructions to randomly pass them out to parents. Those surveys that were returned were routed back through the school board. The response was much greater than expected; 1146 surveys were returned or 38.2% of the surveys distributed. The excellent response translates into a 99.9% confidence level with a 5% precision level.

In addition to the surveys distributed through the school board, an additional 620 were passed out to the course officers in the Air War College (120) and the Air Command and Staff College (500). Responses from these amounted to 33.3% and 34.2% respectively.

Parents of students in private schools were surveyed but the responses did not meet the confidence or precision level tests. After contact with a number of the schools, only the Landmark Christian school agreed to distribute the survey to parents. A total of 192 surveys were distributed through that school; that represented 100% of the students. Of that number only 41 were returned for a 21.4% return rate.

Overall a total of 4,883 surveys were distributed to employers and parents combined. Of that number, 1,624 or 33.3% were returned. Applying these responses to the total population of Montgomery, it is safe to use this sampling to predict with above 95% confidence the feelings of the local community concerning MAXHELP and the ability of Maxwell-Gunter to assist the local community in furthering the study of science and technology.

CHAPTER 3

ANALYSIS

The analysis phase of the project consisted of reviewing computer products obtained from the computer program "Statistical Package for the Social Sciences (SPSS)" (2) (3) in order to determine community needs. The data was first reviewed for accuracy by examining the data for consistency in responses and incomplete responses. Approximately 0.5% to 2.2% of the responses were in error. As an example of incorrect responses, question eight dealt with the sex of the respondent, A=female and B=male. Yet the computer tabulated responses indicated one C, one D, two E's and 15 no answers for a total incorrect response rate of 1.2%

The computer products were next reviewed by several different "groupings" of the data to determine if differences existed between the groups:

a. Employers, parents, ACSC, and AWC course officers

b. Teachers, Administrators, and counselors (from AWC report)

c. Public, private, and parochial schools

d. Years respondent lived in Alabama

e. Education level of respondent

f. Age and sex of the respondent

With a few exceptions, noted later, each of these groupings were basically of the same opinion for the community needs.

The data shown in Appendix D is the "raw" total of the 1645 responses received for each question in the ACSC survey. From this data we note that 2.8% of the total respondents have no children, 13.7% have one child, 65.2% have two or three children, and 16.5% have four or more children. The ages of the children are considered by question four where 4.3% are ages 1-5, 25.6% ages 6-10, 34.1% ages 11-14, 17.9% ages 15-18, and 13.6% over 18. These percentages are biased because the computer survey sheets were only scored for the highest age represented (not all as shown in the questionaire). Question five surveyed the length of time the respondent lived in Alabama to determine permanent residents versus transient residents. The results show that more than 72% of the respondents have lived in Alabama more than five years. Most of the respondents have completed college (55.1%), while 37% have completed

high school, and only 6.3% have not completed high school. Question seven surveyed the age groups of the respondents, 11.6% were 20-30, 59.0% were 31-40, 20.9% were 41-50, 5.0% were 51-60, 1.6% were over 60 years old. 55.3% of the returned surveys were completed by females and 43.6% by males. Question nine surveyed the number of employees the business employeed, however, in 7.2% of the surveys this question was not answered and approximately 25% of the parents responded with other than E. Question ten and eleven examined the adequacy of the local school system education and the need for more vocational training. These results are analysed later in this chapter.

In order to analyse the need for the programs suggested by survey questions 12 through 64, the responses were grouped by adding A plus B responses and D plus E responses producing three columns for each question (Appendix E). The columns can be viewed as "not needed" (A+B), "don't care" (C), and "needed" (D+E). The "needed" responses were then compared by the "groupings" noted above and these summarized responses from the employers and parents (1645 respondents) are shown in Table I. An asterisk is printed next to the percentage if more than 53% of the respondents felt the activity would be desirable. There is a strong agreement between the employers, public school parents, and ACSC/AWC course officers. The private school parents had a greater desire for students to use Air University library facilities, a need for more equipment, and written materials. Also noted in the table is the indication that the grouping of employers/parents (total) percentages are representative of the overall needs.

Table II shows a similiar presentation for the surveys collected by the Air War College project survey. The table is broken down by teachers (782 respondents), administrators (28 respondents), counselors (32 respondents) and a total for the group. Note that the counselors and administrators felt a need for more field trips, equipment, and written materials than the teachers. With the exception of the equipment, the total percentages are representative of this grouping of educators.

Table III compares the two groupings employers/parents and educators. The employers/parents have a greater need for field trips, equipment, tutors, and written materials than the educators. Note also that the educators did not feel that tutors were needed in the basic courses in contrast with the employers/parents.

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QUESTIONS	Employer/Parent Total	EMPLOYER	PUBLIC	PRIVATE	ACSC	AWC
RESPONDENTS	1645	231	1154	41	173	40
12. AF GUEST SPEAKER	27.7	26.6	27.1	39.0	29.1	33.3
13. LOCAL BUSINESS SPEAKER	44.6	45.7	44.8	51.2	42.4	35.9
14. TEACHERS USE AUL	54.5 *	62.6 *	55.1 *	32.5	37.8	42.1
15. STUDENTS USE AUL	49.0	56.2 *	52.2	70.0 *	19.2	35.9
16. USE HONEYWELL TSS	64.6 *	65.8 *	67.6 *	80.5 *	42.4	48.7
17. FIELD TRIPS TO COMPUTER	65.2	63.3 *	66.9 *	82.9 *	52.3	64.1 *
18. TRIPS TO HIGH TECH PLANTS	69.1 *	73.5 *	67.9 *	73.2 *	66.9 *	79.5 *
19. TRIPS TO LOCAL MEDIA	60.7 *	51.1	64.2 *	65.9 *	51.2	55.3 *
20. ORIENTATION FLIGHTS	43.6	33.2	46.7	51.2	33.7	46.2
21. ACADEMY MOTIVATIONAL FILMS	41.2	39.1	41.8	51.2	36.0	44.7
22. AFROTC FILMS	40.2	36.2	40.5	39.0	37.8	59.0 *
23. CAP FILMS	30.9	31.0	31.4	34.1	22.1	43.6
24. AF TECH APPLICATION FILM	42.9	46.1	40.1	51.2	52.9	48.7
25. PHYSICS LAB EQUIPMENT	69.0 *	74.2 *	66.5 *	82.5 *	76.3 *	66.7 *
26. CHEMISTRY LAB EQUIPMENT	73.9 *	78.7 *	72.0 *	85.0 *	76.9 *	76.9 *
27. BIOLOGY LAB EQUIPMENT	71.7 *	73.3 *	71.2 *	87.5 *	69.2 *	71.8 *
28. ELECTRONICS COMPONENT	72.7 *	72.0 *	71.4 *	85.0 *	79.9 *	71.8 *
29. PHOTO EQUIPMENT	44.2	43.8	44.9	55.0 *	37.3	46.2
30. METAL-WOOD SHOP EQUIP	46.4	43.0	46.3	55.0 *	47.3	47.4
31. MECHANICAL COMPONENTS	50.7	46.0	51.9	65.0 *	46.7	43.6
32. OFFICE MECHINES	56.7 *	49.1	60.6 *	60.0 *	43.2	43.6
33. ELECTRICAL APPLIANCES	41.9	31.8	46.0	45.0	29.0	30.8
34. TUTOR BASIC COMPUTER	81.0 *	82.1 *	80.8 *	85.0 *	81.3 *	80.0 *
35. TUTOR PROGRAMMING	80.7 *	78.2 *	80.8 *	90.0 *	81.3 *	84.6 *
36. TUTOR COMPUTER APPLIC	77.1 *	77.6 *	76.6 *	87.5 *	76.6 *	80.0 *
37. TUTOR MATH	72.0 *	72.1 *	70.0 *	80.0 *	84.8 *	70.0 *
38. TUTOR ALGEBRA	72.8 *	69.9 *	71.6 *	90.0 *	82.9 *	62.5 *
39. TUTOR GEOMETRY	69.8 *	65.8 *	69.0 *	92.3 *	77.1 *	62.5 *
40. TUTOR TRIG	68.5 *	64.8 *	66.8 *	92.5 *	80.0 *	65.0 *
41. TUTOR CALCULUS	66.6 *	67.8 *	64.2 *	87.5 *	77.1 *	62.5 *
42. TUTOR GENERAL SCIENCE	60.8 *	59.6 *	59.4 *	80.0 *	68.2 *	52.5
43. TUTOR BIOLOGY	62.9 *	56.6 *	62.2 *	85.0 *	70.0 *	60.0 *
44. TUTOR CHEMISTRY	70.9 *	69.3 *	69.6 *	92.5 *	78.2 *	65.0 *
45. TUTOR PHYSICS	72.2 *	72.8 *	70.0 *	92.5 *	82.4 *	67.5 *
46. TUTOR SPEAKING	73.4 *	71.5 *	73.8 *	65.0 *	74.1 *	80.0 *
47. TUTOR WRITING	74.2 *	77.6 *	73.0 *	70.0 *	76.5 *	82.5 *

ACSC Survey Results, by Group, "D+E" Percentages

TABLE I

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QUESTION	Employer/ Parent Total	EMPLOYER	PUBLIC	PRIVATE	ACSC	AWC
48. AERO COLORING BKS 1-3	29.3	23.0	30.4	39.0	27.2	25.0
49. AERO TOPIC ACTY BKS 4-6	37.5	30.0	38.7	43.9	38.8	28.2
50. AERO LEARNING KITS 4-6	44.0	35.7	46.4	48.8	36.5	42.5
51. AERO PERSONALITY SPACE 6-8	46.9	34.8	48.2	68.3 *	45.9	59.0 *
52. AERO POSTERS	32.7	28.2	34.3	36.6	24.7	35.0
53. HIGH SCHOOL TEXT BOOKS	49.0	44.7	49.4	58.5 *	47.6	50.0
54. SELF STUDY WEATHER	46.5	39.3	49.7	41.5	34.7	50.0
55. SELF STUDY ELECTRONICS	67.7 *	67.8 *	67.4 *	82.9 *	65.1 *	67.5 *
56. SELF STUDY MEDICAL	57.6 *	48.9	60.8 *	75.6 *	45.0	50.0
57. SELF STUDY AIR TRAFFIC CONT	36.2	26.6	40.8	41.5	16.6	35.0
58. SELF STUDY JET ENGINE	34.2	24.6	36.7	48.8	26.6	32.5
59. COMPUTER ORIENTATION	81.0 *	82.9 *	81.0 *	90.2 *	77.6 *	79.5 *
60. SCIENCE AND TECH PRESENTATION	68.5 *	70.2 *	67.0 *	85.4 *	74.1 *	66.7 *
61. COMPUTER CAMPS	79.4 *	84.2 *	78.8 *	87.8 *	74.1 *	84.2 *
62. ASSIST SCIENCE FAIRS	61.8 *	57.5 *	61.8 *	78.0 *	64.1 *	61.5 *
63. COMPUTERS AND S/W FOR SCHOOL	74.7 *	78.4 *	76.1 *	78.0 *	59.4 *	79.5 *
64. SCOUT PROGRAMS	59.0 *	58.3 *	58.9 *	61.0 *	59.4 *	66.7 *
65. PERCEPTION OF COMPUTER ROLE	84.1 *	88.2 *	83.5 *	78.0 *	84.1 *	87.5 *
66. COMPUTER ROLE IN 5 YEARS	91.0 *	94.3 *	90.1 *	87.8 *	92.9 *	92.5 *
67. COMPUTER ROLE IN 5-10 YEARS	90.6 *	93.4 *	89.7 *	92.7 *	92.4 *	90.0 *
68. IMPORTANCE OF COMPUTER TNG	90.7 *	92.1 *	90.6 *	90.2 *	89.5 *	92.1 *
69. TYPE OF COMPUTER TRAINING	68.6 *	62.4 *	74.0 *	60.0 *	44.4 *	62.5 *
70. WHERE USE COMPUTERS	53.4 *	60.8 *	54.1 *	76.9 *	33.9 *	53.8 *
71. LOCAL HS ADEQUATE IN SCIENCE	23.8 *	13.3	29.2	13.5	4.8	15.0
72. MORE MANDATORY SCIENCE & MATH	70.9 *	81.0 *	68.0 *	73.7 *	76.5 *	72.5 *
73. HS SIT IN ON COLLEGE COURSES	63.0 *	60.4 *	67.3 *	66.7 *	37.5 *	57.5 *
74. CO-OP TRAINING USEFUL	73.0 *	72.6 *	75.9 *	66.7 *	54.5 *	60.5 *

TABLE I (CONCLUDED)

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QUESTION	EDUCATOR TOTAL	TEACHERS	ADMIN	COUNSELORS
RESPONDENT	852	782	28	32
12. AF GUEST SPEAKER	26.9	27.6	21.4	18.8
13. LOCAL BUSINESS SPEAKER	40.4	39.9	42.9	53.1
14. TEACHERS USE AUL	60.0 *	59.3 *	71.4 *	62.5 *
15. STUDENTS USE AUL	43.1	42.3	50.0	50.0
16. USE HONEYWELL TSS	52.3	51.3	53.6	73.3
17. FIELD TRIPS TO COMPUTER	50.1	49.7	32.1	71.9 *
18. TRIPS TO HIGH TECH PLANTS	51.9	51.3	39.3	78.1 *
19. TRIPS TO LOCAL MEDIA	60.9 *	61.2 *	53.6 *	65.6 *
20. ORIENTATION FLIGHTS	35.7	35.5	32.1	43.8
21. ACADEMY MOTIVATIONAL FILMS	40.7	40.2	32.1	59.4 *
22. AFROTC FILMS	31.1	30.5	25.0	43.8
23. CAP FILMS	23.3	23.3	25.0	18.8
24. AF TECH APPLICATION FILM	27.6	27.5	32.1	25.0
25. PHYSICS LAB EQUIPMENT	40.6	39.2	60.7 *	56.3 *
26. CHEMISTRY LAB EQUIPMENT	45.4	43.8	64.3 *	65.6 *
27. BIOLOGY LAB EQUIPMENT	51.6	50.1	67.9 *	71.9 *
28. ELECTRONICS COMPONENT	36.5	35.8	35.7	53.1 *
29. PHOTO EQUIPMENT	37.5	36.6	50.0	50.0
30. METAL-WOOD SHOP EQUIP	29.0	27.8	17.9	59.4 *
31. MECHANICAL COMPONENTS	27.6	27.4	17.9	38.7
32. OFFICE MECHINES	52.6	52.1	60.7 *	59.4 *
33. ELECTRICAL APPLIANCES	32.9	32.4	33.3	46.9
34. TUTOR BASIC COMPUTER	71.4 *	70.9 *	74.1 *	84.4 *
35. TUTOR PROGRAMMING	67.5 *	66.6 *	75.0 *	81.3 *
36. TUTOR COMPUTER APPLIC	66.8 *	65.8 *	78.6 *	81.3 *
37. TUTOR MATH	65.9 *	66.0 *	67.9 *	62.5 *
38. TUTOR ALGEBRA	44.3	43.4	35.7	68.8 *
39. TUTOR GEOMETRY	33.9	34.4	25.0	25.0
40. TUTOR TRIG	27.1	26.8	25.0	26.7
41. TUTOR CALCULUS	26.1	25.9	25.0	25.0
42. TUTOR GENERAL SCIENCE	56.2 *	56.0 *	60.7 *	50.0
43. TUTOR BIOLOGY	39.9	39.6	39.3	34.4
44. TUTOR CHEMISTRY	33.5	33.3	39.3	25.0
45. TUTOR PHYSICS	32.2	31.3	35.7	43.8
46. TUTOR SPEAKING	65.7 *	65.3 *	67.9 *	71.9 *
47. TUTOR WRITING	73.3 *	72.9 *	71.4 *	81.3 *

AWC Survey Results, by group, "D+E" Percentages

TABLE II

QUESTION	EDUCATOR TOTAL	TEACHERS	ADMIN	COUNSELORS
48. AERO COLORING BKS 1-3	32.5	32.8	42.9	12.5
49. AERO TOPIC ACTY BKS 4-6	37.7	38.0	46.4	15.6
50. AERO LEARNING KITS 4-6	39.1	39.3	42.9	25.0
51. AERO PERSONALITY SPACE 6-8	41.8	41.2	39.3	50.0
52. AERO POSTERS	45.4	45.5	28.6	46.9
53. HIGH SCHOOL TEXT BOOKS	25.6	24.7	10.7	48.4
54. SELF STUDY WEATHER	45.8	45.6	42.9	50.0
55. SELF STUDY ELECTRONICS	53.6 *	52.9	46.4	71.9 *
56. SELF STUDY MEDICAL	38.9	38.0	29.6	59.4 *
57. SELF STUDY AIR TRAFFIC CONT	23.8	23.8	3.6	40.6
58. SELF STUDY JET ENGINE	23.8	24.0	3.6	35.5
59. COMPUTER ORIENTATION	75.3 *	75.3 *	82.1 *	81.3 *
60. SCIENCE AND TECH PRESENTATION	63.8 *	62.8 *	75.0 *	84.4 *
61. COMPUTER CAMPS	70.1 *	69.3 *	75.0 *	87.5 *
62. ASSIST SCIENCE FAIRS	56.7 *	56.0 *	57.1 *	77.4 *
63. COMPUTERS AND S/W FOR SCHOOL	74.6 *	74.1 *	78.6 *	90.3 *
64. SCOUT PROGRAMS	41.6	42.0	25.9	55.2 *

NOTE: AWC Survey did not include question 65-74.

TABLE II (Concluded)

10

QUESTION	Employer/ Parent Total	EDUCATOR EMPLOYER
RESPONDENT	1645	852
12. AF GUEST SPEAKER	27.7	26.9
13. LOCAL BUSINESS SPEAKER	44.6	40.4
14. TEACHERS USE AUL	54.5 *	60.0 *
15. STUDENTS USE AUL	49.0	43.1
16. USE HONEYWELL TSS	64.6 *	52.3
17. FIELD TRIPS TO COMPUTER	65.2 *	50.1
18. TRIPS TO HIGH TECH PLANTS	69.1 *	51.9
19. TRIPS TO LOCAL MEDIA	60.7 *	60.9 *
20. ORIENTATION FLIGHTS	43.6	35.7
21. ACADEMY MOTIVATIONAL FILMS	41.2	40.7
22. AFROTC FILMS	40.2	31.1
23. CAP FILMS	30.9	23.3
24. AF TECH APPLICATION FILM	42.9	27.6
25. PHYSICS LAB EQUIPMENT	69.0 *	40.6
26. CHEMISTRY LAB EQUIPMENT	73.9 *	45.4
27. BIOLOGY LAB EQUIPMENT	71.7 *	51.6
28. ELECTRONICS COMPONENT	72.7 *	36.5
29. PHOTO EQUIPMENT	44.2	37.5
30. METAL-WOOD SHOP EQUIP	46.4	29.0
31. MECHANICAL COMPONENTS	50.7	27.6
32. OFFICE MECHINES	56.7 *	52.6
33. ELECTRICAL APPLIANCES	41.9	32.9
34. TUTOR BASIC COMPUTER	81.0 *	71.4 *
35. TUTOR PROGRAMMING	80.7 *	67.5 *
36. TUTOR COMPUTER APPLIC	77.1 *	66.8 *
37. TUTOR MATH	72.0 *	65.9 *
38. TUTOR ALGEBRA	72.8 *	44.3
39. TUTOR GEOMETRY	69.8 *	33.9
40. TUTOR TRIG	68.5 *	27.1
41. TUTOR CALCULUS	66.6 *	26.1
42. TUTOR GENERAL SCIENCE	60.8 *	56.2 *
43. TUTOR BIOLOGY	62.9 *	39.9
44. TUTOR CHEMISTRY	70.9 *	33.5
45. TUTOR PHYSICS	72.2 *	32.2
46. TUTOR SPEAKING	73.4 *	65.7 *
47. TUTOR WRITING	74.2 *	73.3 *

Comparison of ACSC and AWC Results, "D+E" Percentages

TABLE III

QUESTION	Employer/Parent Total	EDUCATOR EMPLOYER
48. AERO COLORING BKS 1-3	29.3	32.5
49. AERO TOPIC ACTY BKS 4-6	37.5	37.7
50. AERO LEARNING KITS 4-6	44.0	39.1
51. AERO PERSONALITY SPACE 6-8	46.9	41.8
52. AERO POSTERS	32.7	45.4
53. HIGH SCHOOL TEXT BOOKS	49.0	25.6
54. SELF STUDY WEATHER	46.5	45.8
55. SELF STUDY ELECTRONICS	67.7 *	53.6 *
56. SELF STUDY MEDICAL	57.6 *	38.9
57. SELF STUDY AIR TRAFFIC CONT	36.2	23.8
58. SELF STUDY JET ENGINE	34.2	23.8
59. COMPUTER ORIENTATION	81.0 *	75.3 *
60. SCIENCE AND TECH PRESENTATION	68.5 *	63.8 *
61. COMPUTER CAMPS	79.4 *	70.1 *
62. ASSIST SCIENCE FAIRS	61.8 *	56.7 *
63. COMPUTERS AND S/W FOR SCHOOL	74.7 *	74.6 *
64. SCOUT PROGRAMS	59.0 *	41.6

TABLE III (Concluded)

Analysis similiar to that discussed above was performed on the employer/parent data to look for differences in needs between public, private, and parochial schools. No major differences were revealed except question 10 and 11. Question 10 asked: "Do local schools provide an adequate education for children?" 63.5% of the public school parents answered yes while 72.5% of the private schools parents and 74.3% of the parochial school parents answered no. This might be expected since these parents have removed their children from the public schools. Question 11 asked: "Do you think high schools should offer more vocational training?" 77.6% of the public school parents and 73.4% of the private school parents answered yes and 50.0% of the parochial parents answered no. While this is somewhat surprising, it should be noted that the parochial school sample was not representative of the population.

The data was also reviewed for how long the respondents lived in Alabama, the education level of the respondent, and the age of the respondent. No major exceptions were noted within each of these groupings indicating that no significant bias exists among the groups.

This project added questions 65 through 74 beyond the activities surveyed in the AWC survey. Questions 65 through 70 dealt with the importance of the role of the computer. Overall more than 90% of the respondents felt that computer training is important for students provided an adequate education in math and science. However, more than 70% felt more math and science courses should be required. Also more than 70% felt that it would be useful for students to sit-in on college level courses and cooperative training programs.

All write-in comments have been included in Appendices F (Parents), G (Employers), and H (ACSC/AWC). These comments are unedited except to retain anonimity and are broken into the major areas of: activities, facilities, services, equipment, and other general comments. Several areas were mentioned more than once and by all groups and will be reviewed below. The remainder of the comments were included for additional review by MAXHELP coordinators.

Response to write-in comments by employers and ACSC/AWC parents was good with a total of 63 and 60 received, respectively. The most frequent comments from employers and ACSC/AWC dealt with use of Maxwell-Gunter facilities and equipment. Respondees believed use of the AU library would be beneficial to students and educators. Also, a strong desire for hands-on training in the computer and electronics area was frequently mentioned.

Making guest speakers such as International Officers available to aid local educators in their "regional survey" studies for local youth was addressed. Lectures/demonstrations and orientations of ROTC programs, and the Civil Air Patrol, electronic equipment as well as computers were also mentioned.

Of the 1146 responses received from the parents of public school students, 150 or 13% added written comments. The comments covered a very wide range of topics and offered a variety of suggestions, but there were a number of similar comments.

The most frequent comment concerned a need for computer literacy among students; 23 of the 150 surveys returned with comments touched this theme. Following closely behind computer literacy was a perceived need for more computer hardware in the schools or the ability to time share Maxwell-Gunter equipment. In this same subject area, there were several comments concerning computer camps and computer training.

Although many of the comments toward MAXHELP were favorable, a significant number of the respondents didn't know what facilities or equipment might be available from Maxwell-Gunter. Many suggested a community awareness program to publicize what the bases can or will be offering. For those who did have some apparent knowledge of what the bases can offer, many suggested visits to base facilities by students, as well as access to the numerous speakers who visit Maxwell. Somewhat related, there were several comments suggesting a closer relationship between the military and civilian communities in Montgomery.

CHAPTER 4

CONCLUSIONS

The objective of this report is to analyze and present a needs assessment
of the Montgomery community. It was not the purpose of this report to
recommend specific projects to be implemented by MAXHELP, but only to present
an analysis of the data collected in a format to aid MAXHELP. The information
in Chapter 3 presents and compares the results of both the ACSC survey of
parents and employers and the AWC survey of local educators.

Several conclusions can be derived from the survey and analysis of the
needs. First, parents and employers believe there is a need for the vast
majority of items presented by the survey. They are relatively consistent
among sample groups in all areas as depicted in Chapter 3, Table I.

Second, responses to questions 65 through 70 on the ACSC survey showed
perceptions to be very high for the computer role in the future. Accordingly,
computer training was also identified as an area where MAXHELP could aid
Montgomery youth and educators.

Third, information presented in this report allows MAXHELP coordinators or
other interested agencies to identify, by group (public vs private), the
group's perceived needs. In that light, specifically tailored instructional
programs could be designed to support a group depending on available resources.

While actual projects implemented by MAXHELP will be resource constrained,
the responsive Montgomery community indicated that anything MAXHELP can do will
benefit Montgomery area youth. The community definitely states the need for
the MAXHELP program and the need to increase the scientific and technological
education level of area youth.

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APPENDICES

COMMUNITY EDUCATIONAL NEEDS SURVEY

Appendix A

COMMUNITY EDUCATIONAL NEEDS SURVEY

BACKGROUND

The United States Air Force recently introduced a new initiative called
"Project Technology 2000." The purpose is to improve the scientific and
technological literacy of America's youth. The Air University sponsored
program at Maxwell Air Force Base is called MAXHELP (Maxwell-Gunter Help
Educate for Local Progress). Several initiatives to improve awareness in
science and technology have been developed and are being implemented
throughout Montgomery and surrounding areas.

PURPOSE

The purpose of this survey, conducted as part of an Air Command and Staff
College student research project, is to find out what you the parents and
future employers of the Greater Montgomery area feel Maxwell-Gunter can do
to contribute to increased technological and scientific literacy among our
local youth. The results of the survey will help Air University refine its
activities and determine what resources it may provide to help meet the
needs of the community.

GENERAL

Participation in this survey is totally voluntary and respondents will not
be identified. The enclosed "standard answer sheet" is provided for you to
record your responses. Please use only the "Response Area" of the form.
Other information (name, school, social security number, etc.) should be left
blank.
If you desire to discuss specific items in the survey, you may call any of the

below listed Air Command and Staff College students at Maxwell Air Force Base:

Major Ronald R. Handley	265-6313
Major Kenneth L. Jackson Jr.	288-8299
Major Philip E. Ruter	361-1573

MARKING INSTRUCTIONS

Please use a number 2 pencil only. Do not use a ballpoint pen. Be sure you fill the space for your answer without going beyond the lines. If you wish to change an answer, be sure you erase your original answer. Do not bend, fold, or mutilate the standard answer sheet since they will be machine scored. Space has been provided at the end of the survey if you desire to add some personal comments. Please do not include any personal comments on the standard answer sheet.

GENERAL BACKGROUND QUESTIONS

1. Are you responding to this survey as a parent or employer?

    A. Parent   B. Employer

2. Your child's/children's school affiliation (if applicable)?

    A. Public   B. Private   C. Parochial

3. How many children do you have?

    A. None   B. 1   C. 2-3   D. 4 or more

4. What are the ages of your children? (Mark all that apply)

    A. 1-5   B. 6-10   C. 11-14   D. 15-18

    E. Over 18

5. How long have you lived in Alabama?

    A. Less than 5 yrs B. 5-10 yrs   C. 11-15 yrs   D. Over 15 yrs

6. What is your educational level?

   A. Did not complete high school   B. High school graduate

   C. College Graduate

7. What is your age group?

   A. 20-30   B. 31-40   C. 41-50   D. 51-60   E. Over 60

8. What is your sex?

   A. Female   B. Male

9. If you are responding as an employer, how many employees does your company employ?

   A. Less than 100 B. 101-250 C. 251-500 D. More than 500

   E. Not responding as an employer

10. Do you think local schools provide an adequate education for children?

    A. Yes   B. No

11. Do you think high schools should offer more vocational training?

    A. Yes   B. No

ANSWER THE FOLLOWING QUESTIONS USING THE SCALE

LEAST   MOST

NEEDED   NEEDED

    A   B   C   D   E

The following items are materials and resources that may be available from Maxwell-Gunter. We would like your opinion of the value of these items to students in the Montgomery area. Rank each item according to the above scale.

Which of the following would least/most benefit youth while still in school?

12. Air Force guest speakers.

13. Local business guest speakers.

14. Use of Maxwell Air Force Base Air University Library facilities by
school faculty members.

15. Use of Maxwell Air Force Base Air University Library facilities by students.

16. Access to Maxwell-Gunter computers on a time sharing basis.

17. Field trips to Maxwell-Gunter maintenance, computer, and shop facilities.

18. Field trips to local manufacturing (high technology) plants.

19. Field trips to local media facilities (TV, radio stations, newspapers).

20. Field trips to Maxwell for aircraft orientation flights.

21. US Air Force Academy motivational films and video tapes.

22. US Air Force Reserve Officer Training Corps (ROTC) motivational films and
video tapes.

23. Civil Air Patrol motivational films and video tapes.

24. Air Force technology application films and video tapes.

If excess Air Force materials/equipment could be made available to local schools,
which of the following are least/most needed?

25. Physics lab equipment.

26. Chemistry lab equipment.

27. Biology lab equipment.

28. Electronic components.

29. Photographic equipment.

30. Metal/wood shop equipment.

31. Mechanical components.

32. Office machines.

33. Electrical appliances.

If volunteer tutors could be made available to local schools, tutors in which subject areas would be least/most needed?

34. Basic computers.

35. Basic computer programming.

36. Computer applications.

37. Basic mathematics.

38. Algebra.

39. Geometry.

40. Trigonometry.

41. Calculus.

42. General Science.

43. Biology.

44. Chemistry.

45. Physics.

46. Speaking skills.

47. Writing skills.

If the following WRITTEN materials could be provided to local schools, which items are least/most needed?

48. Aerospace topic coloring books for grades 1-3.

49. Aerospace topic activity books for grades 4-6.

50. Aerospace topic self-contained multidisciplinary learning kits for grades 4-6.

51. Single concept learning packets on aerospace personalities, space exploration, and general aviation for grades 6-8.

52. Posters showing the chronology of significant aerospace events.

53. High school text books on aerospace and its challenges.

54. Self-study course in weather and related topics.

55. Self-study course in electronics, computers, and related topics.

56. Self-study course in medical/dental science and related topics.

57. Self-study course in air traffic control.

58. Self-study course in jet engine operation.

Which of the following activities/programs presently being offered by Air

University would least/most help students?

59. Basic computer orientation courses for various age groups.

60. Guest presentations in science and technology subjects appropriate for

different age groups.

61. Computer camps at Maxwell Air Force Base in a workshop type environment

appropriate for various age groups.

62. Assistance in developing, sponsoring, and conducting science fairs.

63. Assistance in identification, procurement, and use of computers and computer

software most appropriate for the school environment.

64. Explorer Scout and Boy/Girl Scout computer orientation programs.

ANSWER THE FOLLOWING QUESTIONS USING THE SCALE

LEAST				MOST
IMPORTANT				IMPORTANT
A	B	C	D	E

ROLE OF THE COMPUTER IN BUSINESS AND SOCIETY

65. What is your perception of the role of the computer today?

66. What is your perception of the role of the computer in the next five years?

67. What is your perception of the role of the computer in the next five to

ten years?

68. How important do you think computer training is for students?

69. What type of computer training do you feel is most appropriate for students?

    A. No computer training.

    B. General purpose and the abilities of computers.

    C. Specific applications of computers.

    D. Detailed understanding of computer hardware architecture and computer
programming.

    E. B thru D above depending on the grade level of the student.

70. If computer programming or computer applications are important, do you see
a need for students to have the use of computers at: (Answer all thay apply)

    A. Home

    B. Public Library

    C. School after normal hours

    D. Maxwell AFB or Gunter AFS

    E. Computers are not important

ANSWER THE FOLLOWING QUESTIONS USING THE SCALE

STRONGLY   STRONGLY

DISAGREE_____AGREE____

    A   B   C   D   E

71. Local high schools provide adequate education in the area of science and
mathematics.

72. Local schools should require more mandatory math and science courses.

73. It would be useful for high school students to be able to sit in on college
level lectures held on Maxwell/Gunter.

74. Cooperative training programs on Maxwell/Gunter would be useful for high
school students (1-2 hour afternoon training programs for which high school
credit would be granted)

Are there any activities, facilities, services, or equipment that you feel could be provided by the US Air Force which we have not included in the questionaire that could be useful to students with an aim toward increasing interest in science, mathematics and technology? If so, please identify those below and include any other comments or suggestions that you desire to make.

A. Activities:

B. Facilities

C. Services:

D. Equipment:

E. Other:

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY. PLEASE RETURN BOTH THE STANDARD

ANSWER SHEET AND THE QUESTIONAIRE.

SAMPLING FORMULA

Appendix B

SAMPLE SIZE COMPUTATION METHODOLOGY

To determine the sample size needed for the survey, the following formula was used.

$$n = \frac{z^2 \ (\text{std dev})^2 \ N}{(N-1) \ e^2 + z^2 \ (\text{std dev})^2} \qquad (2{:}214)$$

The components of the formula are as follows:

　　n = The sample size required

　　z = Factor for confidence level (98% selected for this survey)

std dev = Standard deviation (estimated to be .5)

　　N = Total population

　　e = Precision level (5% selected for this survey)　(4:29)

SURVEY DISTRIBUTION

Appendix C

COMMUNITY EDUCATIONAL NEEDS SURVEY DISTRIBUTION

	Distributed Surveys	Returned Surveys	Percentage
Montgomery Chamber of Commerce Members	1,071	226	21%
Air Command and Staff/Parents	500	171	34%
Air War College/Parents	120	40	33%
Public School Parents	3,000	1146	38%
Private School Parents	192	41	21%
TOTAL DISTRIBUTION	4,883	1624	33.3%

SURVEY DISTRIBUTION LISTING

SCHOOL	ENROLLMENT	SURVEYS DISTRIBUTED	RETURNED
Bear Elementary	465	43	
Brewbaker Elementary	1153	107	
Carver Elementary	392	36	
Catoma Elementary	154	14	
Chisholm Elementary	768	71	
Crump Elementary	1002	93	
Daisy Lawrence Elem	336	31	
Dalraida Elementary	452	42	
Dannelly Elementary	712	66	
Davis Elementary	788	73	
Dozier Elementary	562	52	
Dunbar Elementary	265	25	
Fews Elementary	596	55	
Flowers Elementary	519	48	
Forest Ave Elementary	415	39	
Harrison Elementary	601	56	
Hayneville Rd Elem	553	51	
Head Elementary	644	60	
Highland Ave Elem	322	30	
Highland Gardens Elem	831	77	
Johnson Elementary	523	49	
Loveless Elementary	797	74	
MacMillan Elementary	284	26	
Morningview Elementary	449	42	
Paterson Elementary	524	49	
Peterson Elementary	476	44	
Pintlala Elementary	143	13	
Southlawn Elementary	898	83	
Vaughn Road Elementary	554	51	
Wares Ferry Elementary	694	65	
Bellingrath Jr High	879	82	
Brewbaker Jr High	1023	95	
Capitol Heights J H	983	91	
Carver Senior High	1014	94	
Cloverdale Jr High	1241	115	
Floyd Jr High	957	89	
Georgia Washington J H	707	66	
Goodwyn Jr High	1113	103	
Houston Hill Jr High	410	38	
Jefferson Davis Sr H	2208	209	
Lanier Sr High	1294	120	
Lee Senior High	1852	172	
McIntyre High	576	54	
Montgomery County High	288	27	
Carver Junior High	855	79	
TOTALS	32272	3000	1146

"RAW" TOTAL ACSC SURVEY RESPONSES

Appendix D

SURVEY RESPONSES - RAW DATA

	A	B	C	D	E
	1426	205	1*	0	0
	1371	132	37	0	0
	47	226	1072	271	1*
	70	421	561	295	223
	427	160	81	945	15*
	104	609	906	5*	2*
	190	983	343	82	27
	909	717	1*	1*	2*
	169	35	8	29	1285
	933	685	5*	0	2*
	1224	377	4*	3*	2*

GENERAL BACKGROUND QUESTIONS

1. Are you responding as a parent or employer?
   A. Parent   B. Employer

2. Your child's school affiliation
   A. Public   B. Private   C. Parochial

3. How many children do you have?
   A. None   B. One   C. 2-3   D. 4 or more

4. What are the ages of your children?
   A. 1-5   B. 6-10   C. 11-14   D. 15-18   E. Over 18

5. How long have you lived in Alabama?
   A. Less than 5 yrs.   B. 5-10 yrs   C. 11-15 yrs   D. Over 15 yrs

6. What is your educational level?
   A. Did not complete high school   B. High school grad   C. College grad

7. What is your age group?
   A. 20-30   B. 31-40   C. 41-50   D. 51-60   E. Over 60

8. What is your sex?
   A. Female   B. Male

9. If an employer, how many employees does your company employ?
   A. Less than 100   B. 101-250   C. 251-500   D. More than 500   E. N/A

10. Do you think local schools provide an adequate eduation for children?
    A. Yes   B. No

11. Do you think high schools should offer more vocational training?
    A. Yes   B. No

* OBVIOUS INCORRECT RESPONSES USED TO ASSESS ERROR RATE.

WHICH OF THE FOLLOWING WOULD LEAST/MOST BENEFIT YOUTH WHILE STILL IN SCHOOL?

	LEAST NEEDED				MOST NEEDED
	A	B	C	D	E
12. Air Force guest speakers.	221	315	646	272	181
13. Local business guest speakers.	128	215	563	431	299
14. Use of Maxwell Air Force Base Air University Library facilities by school faculty members.	160	187	396	436	455
15. Use of Maxwell AFB Air University Library facilities by students.	197	225	412	340	461
16. Access to Maxwell-Gunter computers on a time sharing basis.	131	142	304	430	623
17. Field trips to Maxwell-Gunter maintenance, computer, shop facilities.	106	148	315	470	598
18. Field trips to local manufacturing (high technology) plants.	91	104	311	493	636
19. Field trips to local media facilities (TV, radio stations, newspapers).	107	129	405	466	526
20. Field trips to Maxwell for aircraft orientation flights.	196	261	466	342	372
21. US Air Force Academy motivational films and video tapes.	173	293	493	348	325
22. US Air Force Reserve Officer Training Corps (ROTC) films and tapes.	180	308	489	366	291
23. Civil Air Patrol motivational films and video tapes.	219	364	546	287	217
24. Air Force technology application films and video tapes.	156	263	514	402	298

IF EXCESS AIR FORCE MATERIALS/EQUIPMENT COULD BE MADE AVAILABLE TO LOCAL SCHOOLS, WHICH OF THE FOLLOWING ARE LEAST/MOST NEEDED?

	LEAST NEEDED A	B	C	D	MOST NEEDED E
25. Physics lab equipment.	111	118	272	404	710
26. Chemistry lab equipment.	88	97	237	448	746
27. Biology lab equipment.	87	102	268	442	715
28. Electronic components.	87	97	256	447	725
29. Photographic equipment.	156	233	511	355	358
30. Metal/wood shop equipment.	155	236	472	366	380
31. Mechanical components.	108	189	496	399	418
32. Office machines.	124	171	401	412	501
33. Electrical appliances.	202	264	471	333	343

40

IF VOLUNTEER TUTORS COULD BE MADE AVAILABLE TO LOCAL SCHOOLS, TUTORS IN WHICH SUBJECT AREAS WOULD BE LEAST/MOST NEEDED?

	LEAST NEEDED				MOST NEEDED
	A	B	C	D	E
34. Basic computers.	107	73	129	312	1005
35. Basic computer programming.	104	58	151	334	976
36. Computer applications.	104	76	192	331	919
37. Basic mathematics.	137	106	211	331	839
38. Alegbra.	102	102	237	354	828
39. Geometry.	93	114	283	360	771
40. Trigonometry.	112	106	291	365	744
41. Calculus.	128	103	308	378	698
42. General Science.	148	140	348	348	638
43. Biology.	124	145	333	408	613
44. Chemistry.	97	106	269	421	731
45. Physics.	104	93	254	415	755
46. Speaking skills.	109	100	223	359	833
47. Writing skills.	119	106	194	323	881

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IF THE FOLLOWING WRITTEN MATERIALS COULD BE PROVIDED TO LOCAL SCHOOLS, WHICH ITEMS ARE LEAST/MOST NEEDED?

	LEAST NEEDED				MOST NEEDED
	A	B	C	D	E
48. Aerospace topic coloring books for grades 1-3.	351	343	455	208	268
49. Aerospace topic activity books for grades 4-6.	239	317	458	304	305
50. Aerospace topic self-contained multidisciplinary learning kits for 4-6.	182	248	479	359	354
51. Single concept learning packets on aerospace personalities, space exploration, and general aviation for grades 6-8.	146	216	497	404	356
52. Posters showing the chronology of significant aerospace events.	241	333	517	274	256
53. High school text books on aerospace and its challenges.	152	185	488	459	334
54. Self-study course in weather and related topics.	139	241	487	416	339
55. Self-study course in electronics, computers, and related topics.	104	135	287	467	633
56. Self-study course in medical/dental science and related topics.	111	178	397	430	503
57. Self-study course in air traffic control.	224	321	488	315	270
58. Self-study course in jet engine operation.	261	302	503	308	245

42

WHICH OF THE FOLLOWING ACTIVITIES/PROGRAMS PRESENTLY BEING OFFERED BY AIR UNIVERSITY WOULD LEAST/MOST HELP STUDENTS?

	LEAST NEEDED				MOST NEEDED
	A	B	C	D	E
59. Basic computer orientation courses for various age groups.	79	80	150	340	974
60. Guest presentations in science and technology subjects appropriate for different age groups.	94	98	320	476	639
61. Computer camps at Maxwell AFB in a workshop environment for different ages.	90	81	164	370	921
62. Assistance in developing, sponsoring, and conducting science fairs.	106	138	377	467	536
63. Assistance in identification procurement, and use of computers and computer software most appropriate for the school environment.	104	71	235	380	830
64. Explorer Scout and Boy/Girl Scout computer orientation programs.	141	149	377	401	557

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	LEAST IMPORTANT				MOST IMPORTANT
	A	B	C	D	E
	52	39	167	388	981
	50	39	58	292	1193
	52	32	69	219	1254
	52	21	79	244	1234
	26	332	152	158	956
	113	145	464	789	37

ANSWER THE FOLLOWING QUESTIONS USING THE SCALE LEAST IMPORTANT TO MOST IMPORTANT

ROLE OF THE COMPUTER IN BUSINESS AND SOCIETY

65. What is your perception of the role of the computer today?

66. What is your perception of the role of the computer in the next five years?

67. What is your perception of the role of the computer in the next 5-10 years?

68. How important do you think computer training is for students?

69. What type of computer training do you feel is most appropriate for students?
   A. No computer training.
   B. General purpose and the abilities of computers.
   C. Specific applications of computers.
   D. Detailed understanding of computer hardware architecture and computer programming.
   E. B thru D above depending on the grade level of the student.

70. If computer programming or computer applications are important, do you see a need for students to have the use of computers at:
   A. Home
   B. Public Library
   C. School after normal hours
   D. Maxwell AFB or Gunter AFS
   E. Computers are not important

ANSWER THE FOLLOWING QUESTIONS USING THE SCALE STRONGLY DISAGREE TO STRONGLY AGREE

	STRONGLY DISAGREE				STRONGLY AGREE
	A	B	C	D	E
71. Local high schools provide adequate education in science and mathematics.	337	386	503	203	180
72. Local schools should require more mandatory math and science courses.	97	83	290	444	701
73. It would be useful for high school students to be able to sit in on college level lectures held on Maxwell/Gunter.	84	155	360	481	539
74. Cooperative training programs on Maxwell/Gunter would be useful for high school students (1-2 hour afternoon training programs for which high school credit would be granted).	65	95	270	507	654

ACSC SURVEY
PERCENT RESPONSES

APPENDIX E

GENERAL BACKGROUND QUESTIONS

	A&B	C	D&E
1. Are you responding as a parent or employer? A. Parent B. Employer	99.9	0.1*	0
2. Your child's school affiliation. A. Public B. Private C. Prochial	97.6	2.4	0
3. How many children do you have? A. None B. One C. 2-3 D. 4 or more	16.9	66.3	16.8
4. What are the ages of you children? A. 1-5 B. 6-10 C. 11-14 D. 15-18 E. Over 18	31.3	35.7	33.0
5. How long have you lived in Alabama? A. Less than 5 yrs B. 5-10 yrs C. 11-15 yrs D. Over 15 yrs	36.1	5.0	59.0
6. What is your educational level? A. Did not complete high school B. High school graduate C. College graduate	43.8	55.7	.4*
7. What is your age group? A. 20-30 B. 31-40 C. 41-50 D. 51-60 E. Over 60	72.2	21.1	6.7
8. What is your sex? A. Female B. Male	99.8	.1*	.2*
9. If an employer, how many employees does your company employ? A. Less than 100 B. 101-250 C. 251-500 D. more than 500 E. Not an employer	13.4	.5	86.1
10. Do you think local schools provide an adequate education for children? A. Yes B. No	99.6	.3*	.1*
11. Do you think high schools should offer more vocational training? A. Yes B. No	99.4	.2*	.3*

* OBVIOUS INCORRECT RESPONSES USED TO ASSESS ERROR RATE.

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WHICH OF THE FOLLOWING WOULD LEAST/MOST BENEFIT YOUTH WHILE STILL IN SCHOOL?

	A&B	C	D&E
12. Air Force guest speakers.	32.8	39.5	27.7
13. Local business guest speakers.	21.0	34.4	44.6
14. Use of Maxwell Air Force Base Air University Library facilities by school faculty members.	21.2	24.2	54.5
15. Use of Maxwell AFB Air University Library facilities by students.	25.8	25.2	49.0
16. Access to Maxwell-Gunter computers on a time sharing basis.	16.7	18.7	64.6
17. Field trips to Maxwell-Gunter maintenance, computer, shop facilities.	15.5	19.2	65.2
18. Field trips to local manufacturing (high technology) plants.	11.9	19.0	69.1
19. Field trips to local media facilities (TV, radio stations, newspapers).	14.5	24.8	60.7
20. Field trips to Maxwell for aircraft orientation flights.	27.9	28.5	43.6
21. US Air Force Academy motivational films and video tapes.	28.6	30.2	41.2
22. US Air Force Reserve Officer Training Corps (ROTC) films and tapes.	29.9	29.9	40.2
23. Civil Air Patrol motivational films and video tapes.	35.7	33.4	30.9
24. Air Force technology application films and video tapes.	25.7	31.5	42.9

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IF EXCESS AIR FORCE MATERIALS/EQUIPMENT COULD BE MADE AVAILABLE TO LOCAL SCHOOLS, WHICH OF THE FOLLOWING ARE LEAST/MOST NEEDED?

	A&B	C	D&E
25. Physics lab equipment.	14.2	16.8	69.0
26. Chemistry lab equipment.	11.4	14.7	73.9
27. Biology lab equipment.	11.7	16.6	71.7
28. Electronic components.	11.4	15.9	72.7
29. Photographic equipment.	24.1	31.7	44.2
30. Metal/wood shop equipment.	24.3	29.3	46.4
31. Mechanical components.	18.4	30.8	50.7
32. Office machines.	18.3	24.9	56.7
33. Electrical appliances.	28.9	29.2	41.9

IF VOLUNTEER TUTORS COULD BE MADE AVAILABLE TO LOCAL SCHOOLS, TUTORS IN WHICH SUBJECT AREAS WOULD BE LEAST/MOST NEEDED?

	A&B	C	D&E
34. Basic computers.	11.1	7.9	81.0
35. Basic computer programming.	10.0	9.3	80.7
36. Computer applications.	11.1	11.8	77.1
37. Basic mathematics.	15.0	13.0	72.0
38. Alegbra.	12.6	14.6	72.8
39. Geometry.	12.8	17.5	69.8
40. Trigonometry.	13.5	18.0	68.5
41. Calculus.	14.3	19.1	66.6
42. General Science.	17.8	21.5	60.8
43. Biology.	16.6	20.5	62.9
44. Chemistry.	12.5	16.6	70.9
45. Physics.	12.2	15.7	72.2
46. Speaking skills.	12.9	13.7	73.4
47. Writing skills.	13.9	12.0	74.2

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IF THE FOLLOWING WRITTEN MATERIALS COULD BE PROVIDED TO LOCAL SCHOOLS, WHICH ITEMS ARE LEAST/MOST NEEDED?

	A&B	C	D&E
48. Aerospace topic coloring books for grades 1-3.	42.7	28.0	29.3
49. Aerospace topic activity books for grades 4-6.	34.3	28.2	37.5
50. Aerospace topic self-contained multidisciplinary learning kits for 4-6.	26.5	29.5	44.0
51. Single concept learning packets on aerospace personalities, space exploration, and general aviation for grades 6-8.	22.4	30.7	46.9
52. Posters showing the chronology of significant aerospace events.	35.4	31.9	32.7
53. High school text books on aerospace and its challenges.	20.8	30.2	49.0
54. Self-study course in weather and related topics.	23.4	30.0	46.5
55. Self-study course in electronics, computers, and related topics.	14.7	17.7	67.7
56. Self-study course in medical/dental science and related topics.	17.9	24.5	57.6
57. Self-study course in air traffic control.	33.7	30.2	36.2
58. Self-study course in jet engine operation.	34.8	31.1	34.2

WHICH OF THE FOLLOWING ACTIVITIES/PROGRAMS PRESENTLY BEING OFFERED BY
AIR UNIVERSITY WOULD LEAST/MOST HELP STUDENTS?

	A&B	C	D&E
59. Basic computer orientation courses for various age groups.	9.8	9.2	81.0
60. Guest presentations in science and technology subjects appropriate for different age groups.	11.?	19.7	68.5
61. Computer camps at Maxwell AFB in a workshop environment for different ages.	10.5	10.1	79.4
62. Assistance in developing, sponsoring, and conducting science fairs.	15.0	23.2	61.8
63. Assistance in identification procurement, and use of computers and computer software most appropriate for the school environment.	10.8	14.5	74.7
64. Explorer Scout and Boy/Girl Scout computer orientation programs.	17.8	23.2	59.0

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ANSWER THE FOLLOWING QUESTIONS USING THE SCALE LEAST IMPORTANT TO MOST IMPORTANT

ROLE OF THE COMPUTER IN BUSINESS AND SOCIETY

	LEAST IMPORTANT		MOST IMPORTANT
	A&B	C	D&E
65. What is your perception of the role of the computer today?	5.6	10.3	84.1
66. What is your perception of the role of the computer in the next five years?	5.5	3.6	91.0
67. What is your perception of the role of the computer in the next 5-10 years?	5.2	4.2	90.6
68. How important do you think computer training is for students?	4.5	4.8	90.7

69. What type of computer training do you feel is most appropriate for students?
   A. No computer training.
   B. General purpose and the abilities of computers.
   C. Specific applications of computers.
   D. Detailed understanding of computer hardware architecture and computer programming.
   E. B thru D above depending on the grade level of the student.

	22.0	9.4	68.6

70. If computer programming or computer applications are important, do you see a need for students to have the use of computers at:
   A. Home
   B. Public Library
   C. School after normal hours
   D. Maxwell AFB or Gunter AFS
   E. Computers are not important

	16.7	30.0	53.4

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ANSWER THE FOLLOWING QUESTIONS USING THE SCALE STRONGLY DISAGREE TO STRONGLY AGREE

	STRONGLY DISAGREE		STRONGLY AGREE
	A&B	C	D&E
71. Local high schools provide adequate education in science and mathematics.	44.9	31.3	0
72. Local schools should require more mandatory math and science courses.	11.1	18.0	70.9
73. It would be useful for high school students to be able to sit in on college level lectures held on Maxwell/Gunter.	14.8	22.2	63.0
74. Cooperative training programs on Maxwell/Gunter would be useful for high school students (1-2 hour afternoon training programs for which high school credit would be granted).	10.1	17.0	73.0

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PARENT COMMENTS

APPENDIX F

NOTE: Appendix provides Parent comments unedited except to retain anonimity.

COMMENTS RECEIVED FROM
PARENTS OF PUBLIC SCHOOL STUDENTS

ACTIVITIES:

1. Can inform the schools more about what part Maxwell can do to help the students on various activities.

2. The need for a better understanding to students as to what armed services stand for and the respect of being a member of the armed forces, closer relationship between civilians to military families.

3. Basic writing skills, basic mathmatics skills, general office practices (filing, filling out forms), interest in reading, interest in knowledge or the act of learning, interest in logic.

4. Films, film strips, tapes and related learning/reading.

5. I am new in the area, do not know your capabilities, nor available staff.

6. Visits to research facilities, laboratories.

7. They don't need no increasing for this activity.

8. Family oriented programs and activities.

9. Actual contact with people in technical fields would be most beneficial.

10. Medical applications, nurses training, medical lab, etc.

11. Assistance with local community service groups, i.e., Boy's clubs, etc.

12. Use the band's bus and sponsor trips to the space museum at Huntsville once each quarter.

13. I am not aware of the various activities, etc. that are available at Max-Gunter. Therefore I would suggest a community awareness campaign to advise the public of the things they could be involved in even if they are non-military oriented civilians.

14. Spend time in base activities, i.e., supply, personnel, accounting & finance to see use of computer-data automation.

15. Aides, resource people.

16. Camps and workshops for kids with computer literacy as a goal.

17. Your MAXHELP (I think that's the name) is good. The children I've observed were truly impressed with the program on computer graphics.

18. Speakers for upper elementary and junior high with specific goals of career orientation and education now. A goal oriented career awareness for specific occupations-students seem to listen to "outsiders" more who are in that particular field-to emphasize what you learn now does count and will help you later.

19. It would be great to use the facilities and resources at Maxwell-Gunter. Transportation might be a problem if left to the individual.

20. The students should be able to attend o. observe performances and programs that Maxwell/Gunter have concerning math and science technology.

21. Perhaps a list of activities, services, etc, could be published in the newspaper monthly to alert residents uf upcoming events, lectures or resource people which are available at Maxwell or Gunter.

22. Air Force effective writing courses. Physical therapy, phys ed training. Effective speaking techniques.

23. Any seminar, demonstration, hands on experiment, etc. would be beneficial in the science curriculum. Junior high science classes are held in a room with desks, no laboratory tables, and being taught only from the textbook.

24. Sporting events to keep children out of trouble.

25. Computer and math "camps" which could be conducted during the summer or on weekends.

26. I think there should be activities for students to become more involved in today's technology and maybe some insights into the future technology.

27. Workshop.

28. There should be more activities in the school not only in or by the USAF such as plays and so forth.

29. The activities that you suggested would be most beneficial-especially if you really do follow through with them. Public schools are at a point where there is a critical need for cooperation between the public and private sectors of our communities.

30. I think if we have a ROTC course starting in elementary school it will help a great deal of our kids in how to behave properly while in school and at home.

31. I think there should be more after school activities such as: soccer, tennis, softball etc.

32. Only some of the activities twice a month per household.

33. Introduction to world cultures, working with maps (topography, elevation, ocean currents—all kinds of maps), use of microfiche, use of vertical files, research techniques, anything on Alabama history.

34. Summer computer camps with scholarships based on need and/or achievement.

35. I have often noticed in the media the excellent guest speakers you have at Maxwell. As an interested individual, I would take advantage of listening to many if an evening 'town meeting" were offered. It would also be an excellent opportunity to broaden the horizons of the students if such meetings were publicized. I think you would be very surprised at the public support for such programs. At times some of these individuals may speak to a small group outside Maxwell (Chamber of Commerce, etc.), but I feel there are many more people in the Montgomery area who would attend if the opportunity were given. I didn't see any reference made to assistance in foreign languages. It would also be nice if somehow the experience of individuals who have lived in foreign countries could be shared with students. I think, especially on the elementary level, pupils would enjoy it.

36. I would like to see space and science camps developed where children could come to learn practical applications of science theory. I would like these camps available for 4-9 graders on varied levels and length of time.

37. Tutoring in reading so children can enjoy all of learning throughout their lives. If their reading is difficult or non-existent, science, math and higher technology are almost out of the question.

38. Help programs as now in progress.

39. All which were mentioned in this survey were adequate.

40. We really have appreciated the MAXHELP computer classes you initiated. We need a lot of help with science fair projects.

41. Community involvement through high visibility, highly promoted community projects, i.e. blood drives, get out the vote, non-profit organizations such as scouts, athletics, etc.

42. I think there should be more after school activities such as: soccer, tennis, etc.

43. Children in high school to work in the different fields for experience.

44. Tutors in advanced chemistry.

45. Being new in the area I was unaware of any activities provided by the Air Force. I think it would be very helpful if a list of speakers and subject matters could be sent to the principals of all schools (public and private) and to their PTA presidents.

46. In my opinion US Air Force does NOT need to become involved in local education. The dollars spent could be used far better by the schools without influence by Air Force personnel.

47. Rather than send guest speakers to each school, why not offer various career days on the base itself. For instance, students wishing to enter the medical field would benefit from a tour of the base hospital. Marketing and business students could visit the exchange, commissary, etc.

48. Geography, computer languages and associated uses/programs.

49. Tours for students to see what you have to offer.

50. There should be more public-military functions on base or off base because most people perceive military establishments as a waste of the taxpayer's money. Maybe Maxwell-Gunter can spons.. ballgames, aeronautics shows, giant picnics, or any other activities of this nature.

51. Sounds like USAF is trying to warrant a lot of money that is spent.

52. For lesser active physically children a drive for more mind filled activities, high school level enjoy numbers and mind puzzlers while junior high level enjoy those visual arcade style learning-suggest offering incentive in programming workshop to view video games and problem solving. High school students get bored with repetition and enjoy a fast game, chess, math, cards, and/or challenge to build or create.

53. Marksmanship training and firearms safety.

54. Do more at school to make students interested.

55. Use of recreation and sports facilities on an open house type basis.

56. Science and technology are important. If you neglect the social development, however, we'll be blown up by a well made bomb. Maxwell could offer diplomatic, political science expertise.

57. Training sessions for volunteers who wish to train students to use computers.

58. I think any field trip or "hands on" experience is very effective, especially to the young impressionable age (grades 1-4), and this becomes a lasting education.

59. Directing astrology classes or sessions.

60. Computer camps for various age groups in this area would be very helpful.

61. Space exploration, computers, and other technological areas related to space. Qualification: My other children have already graduated from high school and I felt they were not prepared for high-tech training or jobs. I feel if you can help in anyway it would be greatly appreciated.

62. An orientation with appropriate grade level students and parents to explain to us how we can prepare our children to face the world of computers. I feel that they are very important and would like to be prepared to help my children.

63. I feel that we sell our kids short when we arrange trips to the zoo, museum, etc. and ignore the military facilities so close to us. You see one zoo, you've seen 'em all - But a ride in a Link trainer for helicopters or other aircraft is a memorable experience.

64. Field trips and demostrations for grade school students.

65. I don't know of any activities or anything else provided by the US Air Force, but all contributions towards children's education I think would be great.

66. Tutors for foreign speaking students enrolled in classes K-12.

FACILITIES:

1. A mini version of the Huntsville space camp would be terrific - even a one or two day experience available at reasonable cost to science oriented students.

2. Try to improve.

3. Not familiar with facilities.

4. Need grammar a hands on computer learning geared to go as fast as child will learn. Which promote better reading and comprehension skills. Jr high = a hands on limited workshop, to progress in area they enjoy (they learn without forcing them more in a book they hate). High school: Kids have by this time have learned basic knowledge and professional guides in this area detour trouble such as hacking.

5. Hope USAF can give use of more, after all USAF uses both facilities on and off bases.

6. The public should have the same privileges as military personnel to check to check out books at the base's library and AU library. Remember that our tax dollars helped to furnish and supply both facilities.

7. Tours of bases with emphasis toward science and technology.

8. ACSC lectures on foreign affairs and national security.

9. Computer section in libraries and courses in learning their abilities.

10. Continued public participation in MAXHELP type projects therefore exposing citizenry to resources and opportunities through Maxwell AFB.

11. One entrance only one exit only.

12. The facilities in which the computers are involved should be exposed or provided for the younger school age children as well as the high school children.

13. Sharing of the base library and gym.

14. It would be most helpful if Maxwell's library courses, and other facilities were more readily available to the civilian population.

15. Only those that the household would want to use.

16. Best recreation facilitiy in community and the various play equipment that go with it.

17. Lab.

18. We must have more facilities and better trained teachers to meet the demand of student interest and smaller classes for a more detailed study to be administered to interested students.

19. Swimming pools, bowling alley, movies.

20. Tour maintenance/flight line facilities.

21. The use of facilities at Max/Gunter are needed by the community and should be provided. We sometimes forget the total purpose of governmental agencies. They are established to insure our country's goals are carried out and for the common good of our citizens.

22. Retail/management – working in a vocational program with BX, library and/or commissary.

23. Federal prison facility as example of minimum security penal institution. Tour of this facility would be most instructive as it illustrates an alternative to children's concept of prisons.

24. Access for students and teachers to computer centers at Maxwell and Gunter.

25. Vocational training.

26. Make more use of hospital/dental facilities to instruct children on science as well as taking care of themselves.

27. Speed reading classes, typing classes.

28. USAF CDC courses in all areas.

29. For the children to participate in a group structured environment after hours to help prevent teen-age crime.

30. I personally feel that Maxwell Gunter has great facilities, and it would be very beneficial to students at all grade levels, which would give them a remarkable chance to prepare themselves for college as well as for the "computer world."

SERVICES:

1. Scholarships sponsored by USAF in these areas.

2. Weather training, geographic interpretations, languages and countries.

3. There should be more career oriented seminars in high schools. This would give students an opportunity to see the great benefit of being in the military services.

4. More competent teachers.

5. Believe lectures by enthusiastic speakers (in math, science, computers) would encourage students to pursue careers in these fields. Outside lecturers might inspire some students to achieve by exposing them to different ideas.

6. First aid classes, civil defense instruction, Air Force management teams to observe and evaluate school systems and teachers for the purpose of reducing fraud, waste and ridding the system or poor instructors.

7. It's a fine program, only needed sooner to help prepare students sooner. Some of the questions on lectures, in science, computers, etc. would be good. In other words, depends on topic.

8. Need area workshop in computers. Observatories: Not just a show and tell, but a full fledged learning course. Also aviation and electronics.

9. More info about Air Force pubic information office to educate public to services/facilities available.

10. Give examples, prove.

11. Provide current and accurate information of various countries and cultures.

12. Let more students know about the civil air patrol and their eligibility to join. How about aero club tours where kids can at least sit in an aircraft. It's awesome the number of kids in Montgomery who have never flown anywhere! How can they visualize flying in space ships?

13. Driving safety course, first aid courses.

14. Medical field.

15. Increased bus service "activity busses" for those who want to do extra work at school. Busses are not available after 3:00 PM. Parents work.

16. OJT.

17. Trained instructors.

18. The inclusion of Air Force persons in conjunction with field trips would be highly educationally motivating to el~mentary through high school aged students.

19. The services of people as teachers t... ' ow the technology or the various fields of the computer.

20. None of the services.

21. Provide transportation to base to take computer courses in the summer.

22. A regular scheduled training program to keep science teacher updated on new developments in the science fields. A program to share personnel with the school in science, math, and communication skills..... Our teachers in these areas need help and stimulation.

23. What ever you need to continue the safety of the bases and American citizens you have so diligently protected them with and are continuing in doing so.

24. I answered the questions about motivational films and tapes as "least needed" because I did not know what they might be motivating. If they motivate a child's interest in math and science the answer would be "E". If they are to motivate a child to join the Air Force, ROTC, CAP etc, then my "A" answer is appropriate. Air Force guest speakers might be most needed, but again my answer was "least needed" because it is a topic of the speech, not the speaker which would constitute whether it is needed or not.

25. Speakers bureau - Excellent! Non college degree type speakers for junior high and high schools badly needed. Knowledge of how to obtain services not known in community. Tutor services (questions 34-37) after school hours could definitely expose students to both remedial ~nd high caliber instruction.

26. Anything you could do to influence our local board of education on the genuine importance of science, math, mastery learning, and individual instruction would be invaluable, if only it could filter down to the classroom K-12. (Elementary level currently gets 25 minutes science instruction per day, alternating every 3 weeks with social studies. Absurd) Could you look into the science curriculum and suggest (via computer?) appropriate enrichment activities, research assignments, individual projects for students?

27. Support helpers.

28. Tutors made available to local schools.

29. Use of the Max-Gunter library is a great idea. Please consider opening this library for use by teachers and students. Your resources far exceed any others available in this part of Alabama.

30. The teachers are the key to improving the school programs. We need to establish programs for the teachers to improve their skills.

31. Availability of equipment, activities, etc at neighborhood locations i.e. limiting lack of transportation as excuse for not participating.

32. Show values clarification film to teachers and administrators.

33. I'd like for the language arts teachers to use the "English as a Second Languages" material you must have available.

34. Training in word processing.

35. Personnel to utilize equipment and activities related to A plus any more available such as language masters, SRA kits, and many other kits available which classroom teachers apparently don't have the time to use.

36. They have enough of services but don't have people for the job so it could get done.

37. More services for the underpriviledged children in need of clothing, food and guidance.

38. Weekend technical courses for all age students.

39. Orientation by ROTC to tell where their scholarships are going. Science/technical area.

40. AFDSDC has a multitude of experts in all phases of computer SCIENCE and real time applications.

EQUIPMENT:

1. Hi-tech computer integral machines, analyzers, X-ray, radar, etc.

2. Word processors.

3. Training aids for teachers.

4. Audio-visual films and tapes.

5. Schools should try to begin having computers to work with in their classes. Hands on is the best teachers.

6. Word processing.

7. Use of computers to teach English, math, science. Even for teaching foreign languages.

8. While stationed in the USAF, I took a speed reading course, a very rewarding experience.

9. I feel that computers are going to play a big part in the future. They are already being widely used in business and government and in private industry. It will be very important f. . '-- children of this age to gain as much knowledge as possible about computers.

10. Microfiche and microfilm monitors. Donation of all maps from your files. Not outdated but those you no longer use. Classroom sets of maps are extremely expensive and are not currently available.

11. Computers that may be outdated for Air Force use.

12. More computers to use and more computer training.

13. We need all kinds of elementary level basic science equipment for simple demonstrations and experimentation. Teachers, however, must be pushed to use it: for example, a 3rd grade unit on physical and chemical changes currently is taught without experiments or demonstrations, only textbook reading and memorization.

14. Surplus or shared time equipment - use careers, etc. and the use thereof, i.e. vehicle maintenance, office machines, general hi-tech career exploration.

15. Computer, electronics, office, etc.

16. Nursing and other equipment in all other fields.

17. Our schools are not well equipped. It excites me that the Air Force would share its equipment or donate its cast off equipment. Thank you for caring enough about our school to create this survey. The Air Force adds quality of life to our community, especially by your support of the arts and the schools. Air Force wives and mothers a. . the officers stationed here do indeed make a positive contribution to out community.

18. Computers.

19. Equipment and materials to help improve the physical conditions of some of our shcools. Schools need beautification as well as repairs - many of them are in terrible condition.

20. Have use of computers during school hours.

21. Allied officers for introduction/exposure to world cultures. Artifacts etc. from different cultures.

22. None of the equipment.

23. I think there should be more equipment.

24. Office equipment (especially a copier machine). Computers. Lab equipment for the various sciences: biology, chemistry, etc.

25. Equipment need to be provided to the individual public schools based on a "needs ratio" especially computer hardware and software.

26. Computers.

27. Parents wouldn't really know what schools have in this area. You should ask the students; they know.

28. Mini computers that parents could rent to help their children at home. Books to explain the importance of computers and their effect on different age levels.

29. I'm not sure that purchasing a lot of computers is #1 priority - with many school buildings improperly heated and cooled, would they work properly?

30. Maps of the world and countries.

31. The elementary school that my children attend in Montgomery (public school) is equipped with 15 Apple IIe computers. Teachers and volunteer parents instruct children in computer use. I would like to see all Montgomery schools equipped with computers.

32. Schools need up to date maps.

33. Show students.

34. Weather and navigational equipment. Is the CAP program at Maxwell? Fire department cooperative training (May already exist).

35. Will need updated computers and software; those that were built will not service our youngsters in this day and age. Math workshops where a higher class teaches a lower class (no one learns faster than by teaching someone else a subject). In learning multiples, as a child asks a question and gives the response to the other child the learning goes on with the child knowing it's a learned subject.

36. It would be great if all students who were interested in computers could have access to one (after school or on Saturdays).

37. The Air Force has the most sophisticated equipment there is. I remember a visit to Eglin and Vandenberg and the technologies were mind-blowing. I was very happy to see something our tax dollars were being used for.

38. Sounds like the USAF has a lot of surplus equipment, after all the military budgets get bigger every year.

39. Microscopes, lazers (small), telescopes, magnets, globes, radar, topographic maps, weather charting ar' charts with related equipment, communication/navigation equipment.

40. I think the children or students should have more equipment.

41. Advanced science equipment.

OTHER:

1. Your emphasis seems to be on the high school level. As far a promoting good education, this is a grave mistake. Thinking should be regeared to elementary level for emphasis on science and mathematics to set the basis for further study later. In Montgomery, the single most effective change would be upgrading the faculty, i.e. better teachers. Perhaps the quota system here has endangered the criteria for hiring capable teachers. Our younger children need more opportunities before it is too late.

2. I think the children of today's world need all the help they can get with everything now being run by computers. If it was different when I was in school, I would have a whole different way of living today. It is also needed for adults too.

3. I'm not familiar with all that Maxwell AFB has to offer but I made an honest attempt to answer as honestly as possible. May God continue to help you to continue with all the great things you are doing for our country, and for our state.

4. The Air Force is a strong body of knowledge and advance technology, so why not share it with the surrounding communities. Get the public involved and they will be more supportive when the defense budget is up for re-negotiation. I must sign my own work for my work is my thoughts and ideas.

5. I would like to see more exposure to math and computers in grades 1-6, and believe many of the programs you mention in your survey would be of great value to the students. I think it is wonderful that you are interested in helping our schools.

6. Maxwell/Gunter possesses a vast technical expertise (Composite). Officers and select EM could share skills in community-technical, professional, medical.

7.   I would like to comment on a few things. The Air Force has a way of forcing themselves on the hard working people. My father was in the Air Force and I didn't like it. If my son wants to join the Armed Forces of any kind, I will let him make up his own mind. Thank you.

8.   All participants must be screened and have proper identification, age, sex, and school. No weapons allowed on person or in vehicle, no drugs or alcohol, no profanity, All must be dressed appropriately, all must be citizens of the United States or in process according to law.

9.   Resource lists from AF families to include: slides films, and momentos collected by Air Force families who have lived and visited all over the world. These would be wonderful resources, visual aids that could be utilized within classrooms, library facilities and local museums and community arts displays.

10. Thank you for the survey. It makes a parent proud that the military shows a concern as to help with the problems faced with education now days. Thank you again. The more education, and best education that we give, helps everyone in the very end to the everyday problems faced throughout the world.

11. It appears that it is necessary that teachers aids should be in every classroom to help the teacher in the development of meeting student needs in specific skills such as in reading/language (phonetics, word-attack skills, etc.) and in the mechanics of grammar and mathematics. I believe that more general testing and if necessary more in-depth or diagnostic testing should be done to identify needs and deficiencies.   I believe federal funding is available for this kind of testing. After testing and assessment, steps should be taken to correct these deficiencies.

12. I think it is a wonderful idea for older people (out of high school or college) to take an interest in younger people and show them jobs they work with. Sometimes that is all it takes to let someone know about something new in life – that they might otherwise never know about or come in contact with.

13. Expose teachers to common skills like speaking and writing. Need academic instructor training for many of Montgomery teachers. Force integration of teachers/bussing of teachers has made many students superior to teachers in common skills. Some teachers are so weak in math in science probably couldn't pass their own courses.

14. Maxwell-Gunter cannot do this, but it seems to me that less federal money for defense and more for education is the real answer to improving the scientific and technological literacy of America's youth.   "Cast off" equipment for the schools is better than nothing, but if we all paid 6 cents for a 3 cent screw rather than $90, as the Pentagon has been known to do, neither our defense nor our education would have to be inadequate.

15. I feel that any help that the Air Force could give the public school system in acquainting our children with the growing technology of the day would be well received.

16. I enjoyed answering your questions. I like the idea of "heroes" visiting the schools to give presentations. At Fort Rucker, the "Silver Eagles" pilots were worshipped by all the school children who dreamed of being precision pilots. I think these presentations are important in the younger grades, before apathy sets in.

17. More student counseling. Maybe sometime a sit down rap session. I think that teacher, student gap needs to be closed, oh yes some parents are some of us is the big problem.

18. Stress workshops for teachers. (I attended an excellent workshop/seminar on stress at Maxwell 2-3 years ago.) Physical fitness programs for students and adults. Techniques in discipline - a major in our public schools. Educators don't seem to have the answers - perhaps the Air Force does.

19. I think the schools will need teachers helpers such as, mothers to volunteer their services. There are so many children, some will need individual help.

20. WE are not USAF connected. My business is not dependent. From my remarks, you can tell I have mixed emotions about the USAF. Hope you all can do more for community relations. I know it is very hard for my family to get friendly with USAF families. They are moving either every nine months or four years. We have our roots here.

21. I firmly believe that every child within his or her own brain has the capability to be a genius. But the slow methods of our learning (school for instance) the brain slows down because the input is slow. Although some children do not excel in one area does not mean that their aptitude in another area would not be as great or greater than in scientific areas. Manual workshop as apprentice work under a professional will take the load off a non-skilled worker-area that is a big lump in our economy. Vocational schools are only good as long as you can afford them. Therefore the apprenticeship worker is a hired employee for x number of hours per week to learn that field. Employers want qualified employees, but so few are willing to accept the role as teacher. I hope you succeed in getting your program off the ground. I give you 100% support.

22. I just wanted to say I think that the Air Force is great for the young. I wish it could be for me but I have a son to raise. It's the best to do to start a future.

23. I've had speakers in my class that didn't add a thing or could, relate to students. Hard to determine something good/bad/beneficial if you haven't seen materials. Could you determine whether a written booklet or figurines would be needed in high school? You probably say no, but it could be used in a great discussion for economics.

24. Pertaining to question 63, I was trying to get help in this area and was told to submit a letter for the request being specific about what I wanted. If

I could be specific, I wouldn't need the help, I would already have specific answers.

25. Having been in the area only six months, I feel I'm not prepared to answer questions 25-47 accurately.

26. I am new in the area, do not know your capabilities, nor availabe staff.

27. The tremendous array of talent and expertise in foreign affairs and world history could be as useful as the science and technical skills available. "Tongue and Quill" should be required reading for every 7-12 grade. Communication skills are needed.

28. We must have discipline first in our classrooms and respect for their teachers before these added programs can be added to the field because there are some who do not want nothing, but to disturb those who want it.

29. The use of the Air Force facilities should be considered a privilege - If students cannot act mature, they should not be allowed access. The students who exhibit high interest and commitment in order to participate.

30. Please seriously consider offering computer camps for the youth of this area. So much of young people's time is wasted in the summer and after school. Also, there seems to be limited opportunities in this area to gain additional education in computer technology for youth.

31. If your in the USAF, it sure makes it more difficult to answer some of the "loaded" questions.

32. It would have been useful to the participants to include the local graduation requirements and electives offered in science, math, and technology by the schools as a way of comparison with other areas of the US. In our opinion, the vocabulary used in your questions is too advanced and technical in most of them for many local parents.

33. It's wonderful for a nice thing to be done.

34. I feel that the US Air Force need more tutors who are interested in providing for the well being of America's youth future.

35. My husband and I have been through the block house at Gunter and were amazed at the computer room, and amount of information stored on tapes. If a 47 year old woman and a 56 year old man were amazed, think of the amazement of students.

36. Enlarging the mental capacity of our children is a paramount concern; however, the present system also neglects their physical training.

37. Question 64. The problem is that Explorer and Girl/Boy scout programs touch only a small percentage of the local student populace. These children are generally from the more "priviledged" segments of society and therefore,

get more of this kind of exposure anyway. Question 73. I'm not sure that is a good idea - maybe for the most mature and "sincere" students. On base classes are not the same as regular on-campus classes (different environment, age mix, etc). Might even be counter-productive.

38. Please make the resources mentioned in the survey availabe to the children in the community.

39. Some of these materials, etc. should he made available for our children in the gifted program.

40. I think the questionnaire covered quite well all the facilities and services that might be offered. I think the civilian populace could benefit immensely from the wealth of knowledge available at Maxwell-Gunter.

41. The downfall of education in America is not the fault of our educators. The real fault lies with the parents. Since the female parent has started working, that leaves no one at home with the children.

42. This is a commendable idea. The resources on our two bases would seem unlimited for students in the Montgomery area.

43. I think our children need extra materials and to be better educated in all phases of math and science. I think this is the area in the public schools that needs the most improvement. I think that our children are not being challenged. A lot of kids are bored and are therefore becoming lazy in their study habits.

44. I feel that the present trend of computer oriented society without a much needed training program for our children to learn these skills and the mathematical knowledge to understand what the computers are printing, we will have a generation of total confusion in managing with everyday living and financial responsibilities.

45. The quality of teachers has to be improved. A student has to pass an appropriate comprehensive examination to graduate. Much more homework should be assigned to students.

46. On many of the questions the usefulness would depend on the student, his attitude and interest.

47. Being a non-military family we are unaware of what the Air Force has to offer and cannot make any worthwhile suggestions.

48. Thousands of Maxwell-Gunter people know little about computers. The Air Force would do well to teach them in the interest of a more economical national defense and leave off-base education alone. National defense dollars and personnel should be used for that purpose. "MAXHELP" is an unneeded program. It is wasting taxpayer's dollars for the political benefit of Maxwell and Montgomery Leaders. There is no free lunch - we are paying the bill. Stop MAXHELP.

49. You posses a reservoir of resources at Maxwell-Gunter and could be a tremendous support to the local educational systems. Thank you for taking the initiative and for caring.

50. Emphasize computer application and not as much on programming.

51. The Air Force is to be commended for its interest in local education. Hopefully, this interest combined with cooperation between the Air Force and local educators will result in more resources being made available for the education of local children.

52. Some of the questions my children have not been involved in so I felt I wasn't qualified to answer.

53. I have answered all questions as the mother of an elementary student. So for I do not know much about the needs of the high schools although I am sure they are great. After being here for the fifth and sixth grades our older child will finish his education in a private school and our other child will go as soon as we can get her in.

54. My perception is that the local schools need more qualified teachers. My son is in the seventh grade is making A's in math, and is performing on a fourth or fifth grade level. I see note from my younger son's teachers that are grammatically incorrect. I realize that the Air Force can't upgrade the Alabama school system, but any help should take into consideration the fact that these children don't have the educational foundation to build on that you and I had. Good luck, I hope you can help.

55. As an engineer I feel the school is offering good basic training. Let's not lose sight of the Air Force mission in attempting to make up for weaknesses in the Alabama tax system. Schools lacking the equipment and facilities questioned about need them all.

56. Thank you.

57. I feel that science courses should be taught in more detail. Due to that some students do not comprehend as easily as others. Thank you.

58. I feel that anything that any community or organization can do for students to "open the door" to opportunities to learn and expand are fantastic. It's great that the Air University even cares enough to send out the survey - Hope it helps to see just what the needs of the future are and prepares the children for it.

59. If the Air Force offered courses for the public and made the public aware of them, it would benefit parents and students alike. Computers are very important and so are math and science. I wish more individual training was available for students from first through twelve grades.

60. If the Air Force and City could go together and have classes in math, computers, and science for parents and students both and let the public know about them, it would benefit everyone.

61. The questionaire reveals an Air University bias. In questions 16-24, what happened to CCAF and enlisted opportunities?

62. Since my children are still very young, I feel I may not have answered many of the questions very knowledgeably! I know nothing about schools today beyond the fifth grade.

63. I feel that the Air Force could be most helpful if a program was developed that targeted the exceptional student in our system.

64. The Air Force can encourage and assist local educators - but must not let them (AF) do the job that is the responsibility of the local educators (people, parents), legislators, etc.). Alabamians are responsible for the education of their children not the USAF. (Even though USAF dependents attend school here too.)

65. I believe you covered all items connected with my principal, personal ideas of important areas in science and math, and highly commend the Air Force personnel for its interest and assistance to our school system and children. We, by the way, are not connected with the Air Force in any way. Thank you.

66. I am glad to participate in this survey. I regret, however, that my daughter decided to contribute by re-marking my answers with a magic marker. I hope this set of answers will not now be wasted.

67. For years Maxwell and Gunter have been helping our schools and children. I just wanted to say thanks.

68. All the computer training the children can get, going by the grade they are in.

69. I am not aware of the various activities, etc. that are available at Max-Gunter - Therefore I would suggest a community awareness campaign to advise the public of things they could be involved in even if they are non-military oriented civilians.

70. It was difficult for me to answer this questionnaire because the oldest child just entered junior high this year. I have no idea how well equipped our high schools are to teach and increase interest in science, math, and technology. Since recent studies seem to indicate a deficiency in these areas of our public schools, I felt I had to answer that any help available would be most needed.

71. Question 69. I believe you missed an important point - training and education should not be necessarily geared to the grade level of the students but rather the ability of the student. I wish some assistance could be given and programs developed for the gifted students in the Montgomery school system.

I believe the gifted teachers in the school system would be very happy to have assistance. Many of the students in the elementary grades are more than ready for an intellectual challenge far beyond what would be expected of most in their age group. These children could really benefit from your programs and expertise! It's our responsibility as adults to insure this group continues to develop their intellectual capacity and do not become bored with the educational programs. I am extremely pleased that Maxwell has the type of leadership concerned enough about the local community that it is willing to share its resources. As a parent, I commend you for your actions and certainly hope these initiatives get off the drawing board. (These comments were unsolicited and I am not connected with military in any manner! I just think the potential you are so graciously offering is tremendous, and I would definitely like to see it fully developed.

72. Because of the low property tax, the revenue generated for education in the state of Alabama is low. Hopefully George Wallace's proposed tax bill for an increase in property tax will pass. Because of the poor funding, schools are generally lacking in equipment and facilities in all areas, not just the areas mentioned in this survey. As you probably know, the Montgomery public schools have provided each school with 1 computer. Some schools with strong PTA's have been able to raise enough money to purchase additional computers and software. Children at these schools have the opportunity to work on the computers fairly regularly. However, the majority of the children in the schools have limited access to the computers. Therefore, any additional exposure that Maxwell or Gunter could provide for the students would be very beneficial. The computer camp suggested in item 61 would be an excellent summer project. Both Huntingdon and AUM offer a 6 week summer computer class for children for $70 (6 lessons). This is fairly expensive and therefore limits enrollment to a few. Maxwell could offer this for less money, thereby making it available to more students.

EMPLOYER COMMENTS

APPENDIX G

NOTE: Appendix provides employer comments unedited except to retain
anonimity.

EMPLOYER COMMENTS

ACTIVITIES:

1. The questionnaire seems to have covered most areas.

2. Allowing students to be around military personnel so that they can get first hand information and a favorable impression of the military.

3. I am not sufficiently familiar with activities at Maxwell-Gunter to have an opinion as to the usefulness of any of them to aid in a scientific and technological education of students in the Montgomery area. My familiarity with Maxwell comes through attending the Associate Air War College Program after having completed and taught the Army Command and General Staff course.

4. Anything that would show a future need for scientific training presented in a manner to stimulate an interest in the individual student. Downplay potential involvement in sports, entertainment, etc. as a profession.

5. Computer science fair exhibit from personal computers to large mainframe and the uses of each.

6. Field trips are a nice idea if the subject matter is on the child's level.

7. Students now need "hands-on" training with computers. To compete in the job market of the future, each student must have more than a passing knowledge of computers. He must be able to use computers in everyday life because before long every job will interact with computers.

8. We are so far behind in Alabama high schools that most of our college students need what you are advocating. Could we get in on your programs?

9. Basic electrical and electronic training.

10. Motivational instruction for parents. Schools, teachers and equipment cannot do as complete a job as parental help and encouragement.

11. On hand contacts at MAFB and Gunter. One on one with personal eye to eye contact with the trained professional staff.

12. A five day summer computer camp for those high school students that are interested, would be of help to the students.

13. Speakers are an important part of motivating a student. Hardware is important, but desire is more important.

14. I think its great for the Air Force to offer assistance to students in any capacity but the school system in Alabama needs to get with it. There is no reason for the type of education that some of the students in the public schools are getting--or not getting.

15. Do as the AF does, teach the teachers to teach. Allow teachers to attend AIC. If you would like to discuss this concept, please call.

FACILITIES:

1. Make Air Unversity's library avialable.

2. Educational learning environment.

3. Access to other AF bases for special skill development on a merit basis.

4. The accessibility of the Maxwell-Gunter libraries would be nice.

5. I feel that it would be quite beneficial for students in this area to be able to use the library or other research facilities at Maxwell or Gunter for projects and papers.

6. Let students use the up-to-date equipment which is used to train the people at MAFB and Gunter.

SERVICES:

1. We have teachers that need improvement as well as students and some substandard colleges in the city as well.

2. Make info about ROTC scholarships, and their strong emphasis on engineering type school subjects available.

3. Aid to present teaching staffs, especially at high school levels, in the design of an up-to-date curriculum in the general sciences. Modernize and emphasize those areas applicable to today and what we see forthcoming in the next 2-3 decades.

4. Providing business software since most children at one time or another will work in someone's business.

5. Research development. Product program development. Presentation techniques and practice. Ether net and communications linking. Summer work/study scholarships. Graphics.

6. For schools outside metro area--courses, lectures, demonstrations, etc. produced by your TV center for in-class viewing could be beneficial.

7. Business services from schools to base for your proposed activities.

8. Home study course for basic electrical/electronic training.

9. Any effort which you make to increase math and english language abilities will be most beneficial to the students after graduation. These skills are

sadly missing when they go into the business world. Knowledge of computer applications will soon be essential.

10. Time slotted by the AF for their instructors to assist the Alabama Educators and Faculty for their public school is desperately needed.

11. Highly trained personnel could do much to enhance the learning concept of high school students.

12. Provide computer training for all levels of school--grammer through high school. Space technology camps, similar to Huntsville's during summer recess to educate and interest students in the space program and associate technologies.

EQUIPMENT:

1. Any excess equipment that can be used in lab situations or demonstrations to show application of the principles we teach.

2. Hands-on approach to training in computers, science, math and uses that apply to work related fields.

3. Calculators, slide rules, drafting equipment and cameras.

4. Any interesting books (biographies, projects, literature, etc.) geared for the school aged child to help enrich his/her learning would be ideal. Programmed kits are also good.

5. Basic equipment to go along with self study courses. Basic home study material during week, then let student go to the base on weekends for hands-on experiences.

6. Montgomery schools, because of low budgets, have scarcity of all types of instructional equipment. Any equipment provided by Maxwell-Gunter would be most helpful to teachers and students.

7. Any equipment that you could donate or loan would be appreciated by students, parents, and teachers.

8. Word processors are in great demand in all types of business offices. The schools are in need of additional equipment but in order for this equipment to be beneficial we must have well qualified teachers which this state does not have. The teachers have not grown with technology.

9. Books--no furnishing in a home is as elegant as a library.

10. Free use of the most modern equipment under the supervision of top instructors.

11. Provide any computer equipment and software to the schools. Edgewood Academy, among other private schools, does not have the financial resources to make this available to all students.

OTHER:

1. Congratulations on a fine project. My kids are grown and I only employ one secertary so I did not feel I should complete your survey. As a former high school Physics instructor and a retired Ai officer, I do appreciate the need for better Hi-tech instruction. Anything you can do to help will be appreciated.

2. We need to re-instate the draft to have better officers. Also it is good experience for all young men to spend 2-3 years in the service of their country.

3. It would appear to me that while I agree with the vital importance of science and technology, we are extending ourselves too far in that direction and overlooking the basic humanities, particularly English and History. Without English, our young people will not be able to read instructions for computer use or comprehend the instructio_s and most importantly retain the knowledge. Without a background in history, they will not understand the need for scientific advancement and leadership.

4. I think it would be fantastic if any part of the suggessted programs mentioned in this questionnaire could be implemented.

5. Although I'm not sure into which category this would fall, I see a real failure in the Alabama public school system to give the students textbooks and reading material that motivates their intelligence. The spelling words our children are now having in class appear to be two grade levels beneath them. Also, there seems to be nothing extra in the way of equipment or activities to challenge the sharper student. He/she appears to be slowed down considerably in class while the slow learners are being caught up on work.

6. Being single, it is difficult for me to answer questions 10 and 11. Beginning with number 12, I felt that all items are important. I do not feel it would be necessary to push AF motivational films, because you should be able to spot those interested in AF careers. Any cooperative work offered by Maxwell-Gunter will have a beneficial effect. Thanks for caring enough to conduct this survey and for any programs resulting from this work.

7. I think all of the possi'_e activities mentioned in the survey are an excellent idea. It would be necessary for the schools to identify or group students according to their level of progress or ability. This way the AF could know if they had average or below-average students to work with. I'm a strong believer in the military, however the education the AF might offer should be kept in a civilian atmoshpere for students below the high school level.

8. I feel that all the areas touched by this survey are important and any help to further everyone's education is of great importance.

9. Anything that you can do to help this community will be appreciated by many.

10. The concept and end result of this endeavor will be beneficial to our youth.

11. As an employer in a high tech business, we need young people with basic electrical and electronic skills and computer knowledge. Good luck with your program. Could I get a copy of your findings?

12. It is highly commendable of Maxwell-Gunter to consider helping the public schools with assistance in instruction, lectures, facilities, equipment, computer training, etc. This help could greatly improve the quality of education and the abilities of thousands of Montgomery students--future adults who will move into the job markets, formal university education, etc. All help possible is needed.

13. Thank you for your interest in the Montgomery community. I hope some of these ideas are implemented.

14. Along with the need for technical and scientific knowledge, there must be an emphasis placed on the ability of the students to communicate their ideas both verbally and through written skills. In the manufacturing environment, I find a gross inability to communicate both orally and in writing as well as an inability to read to be one of the major areas lacking in our current school programs.

15. I am interested in helping the handicapped learn to use computers so that they might be better prepared for higher paying jobs. I do volunteer work at the Montgomery Therapeutic Center and am specifically referring to a cerebral palsey victim in the swim program. I would be willing to attend the computer course with him to help interpret his speech and am willing to work with him in any other way that would be useful in his learning computer programming. If this works for him, it could possibly work for other handicapped people if you at Maxwell-Gunter are willing to give your time and skills in this project. Please call me if there is any possibility that my friend might enroll.

16. Proper dissemination of material and speakers to the local high schools that they may know what is available. I think this proposal would be a tremendous asset and motivation to our teachers and students. A speaker on science fairs at the beginning of the school year would motivate a wider participation.

17. Thank you for your willingness to help the community. I personally feel that assistance that could be offered in basic learning skills would be most helpful. Also for those interested in electronics, computers, air traffic control the self study courses would be good. Even though I have small children, I question the wise use of tax dollars in supplying things like coloring books.

18. I recently taught two courses at night at AUM (freshman level government) and was astounded by the lack of writing and grammer skills displayed by the students. Furthermore, they exhibited little pride in their work--two term papers which were supposed to be typed were written in pencil on spiral paper. I failed three students based on their performance and am wondering how they could have possibly graduated from high school. At the office, many resumes are submitted with spelling errors and other mistakes. If the Air Force can only work in one area in our schools (which, in my opinion is not being addressed) I would recommend that you stress professionalism: as a student and future employee. Thank you for conducting this survey. I hope the results will be helpful.

19. The library would be most helpful to faculty at any of the local schools. It could also be useful to students who have demonstrated an interest and aptitude in not only the areas of science and technology, but in history, geography and some of the so-called soc: sciences such as psychology. The faculty at Air University could be helpful in training teachers at the high school level to present their subjects more effectively. There is, however, no substitute for knowledge of the subject and enthusiasm for teaching. In answering the questions on the standard answer sheet, I was handicapped by the fact that we do not use computers in our business or profession and that I have considerable skepticism concerning the abilities of most students to understand and use computers until they have first had a thorough education covering grammer and rhetoric, drill in reading and writing, particularly analytical writing. Computers should not even be permitted from grades one through eight until students have demonstrated a thorough knowledge of arithmetic and the ability to solve arithmetical problems up through derivation of square roots. At the high school level, computers could be of great help, once again, if students have mastered at least two years of algebra, plane geometry and trigonometry. Any student who cannot derive and explain the binomial theorem should not be permitted a computer in mathematics. There is, of course, a place for computers for high school students who are not planning to obtain a college degree or advanced degrees, but have demonstrated arithmetical, mathematical and analytical abilities, but prefer a career in business or in some technical field which does not necessarily require a full four year college course or advanced degree. There is no doubt that computers, lasers and advanced technology can make a tremendous difference in the next fifteen years, but it is no substitute for basic industries such as machine manufacturing, automobiles, engines, steel, metalurgy, railroads, trucks, ships and farming. Otherwise, we will have the most sophisticated system for gathering information on unemployment and suffer in our ability to have an effective national security program.

20. The type of activities, facilities, service, and equipment the AF is offering students, citizens, and schools in Montgomery provides a splendid opportunity for all who would become involved. I appreciate and applaud what you are doing. Businesses can well benefit down the road from your generosity.

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ACSC/AWC COMMENTS

APPENDIX H

NOTE: Appendix provides ACSC/AWC parent comments unedited except to retain anonimity.

ACTIVITIES:

1. Computer programs for young students.

2. I would like very much to see the items I have indicated "most needed" be available to my classes.

3. Make all activities available to private schools as well as public schools.

4. Through guest speakers, student field trips, etc. Students need to be made aware of the importance of science, math, and technology not just career consideration, but also in their everyday lives in the future. Students who feel a real self need to learn any subject and recognize the value of that subject will be better learners. Professionals can be useful role models to help students see the need for success in school academics.

5. I think visits are rewarding. Young people can project themselves into jobs and may be able to identify the training necessary to get there. Schools are so weak on basics, that I doubt the advantage of advanced course to all except a very few.

6. Give them youth jobs to learn while working.

7. My children are at Morningdale Elementary school. These schools are pathetic in sciences and math, but they don't need things (equipment, computers, etc.) they need competent teachers who know science and can teach it. Memorizing facts out of a book is the way science is taught at Morningside.

8. Computer workshops and orientations for local school teachers and administrators with a range of objectives from the basics to complex computer programming and applications. The more informed the teachers, the better they can teach.

9. Computer clubs or users groups with Air Force backing.

10. More orientation flights and tours for local school children geared toward respective age groups.

11. I cannot emphasize enough the need for Air Force personnel to help organize, lead, and encourage participation in science and math fairs on a judgement basis. Through hands-on experience, children often learn the most and become motivated for satisfactory accomplishments.

12. Orientation flights. Simplified computer simulation games in math/science. Guest attendance of high school students in SOS, ACSC, AWC and other base schools when technology issues are being discussed.

13. Sessions that let kids know early on what skills are required to meet the challenges that they seek. Let them see how important math and science really are if you want to be an aerospace engineer, astronaut, etc.

14. Visit to an operating room of a hospital, both before and during an operation.

15. You have ignored the fact that Alabama public schools need basic reform to make them more than an 8th grade education packed into 12 grades. Let's fix the attitude and tax structure before we worry about AU's ability to rearrange the deck chairs on Alabama' educational "Titanic".

16. More lab experiences and visits to hj-tech scientific computer utilizing industries. USAF hospital--displays and recruitment for young people to go into future areas of space medicine, sports medicine, etc.

17. Senior high school students being able to talk to Air Force personnel who are just out of high school.

18. Base open houses, other acitivities mostly oriented toward recruiting.

19. I feel the Air Force can and should provide interest stimulating activities for school age children. I do not feel the Air Force should take over the role of the school, which seems to be the thrust of this survey.

20. First aid. Business courses.

21. Develop a once a week "show and tell" program to take to the schools either about fluids, flight, chemistry, physics, computers--A science "show and tell". Not once a year but once a week per school. The number of schools would be determined by the number of volunteers.

22. ACSC tape lectures form the leadership, policy-making and regional studies phases: Students know too little of the rest of the world. Computers are necessary, but so is living together. Can CAP fly orientation flight?

23. I feel one of the greatest needs in public education is a comprehensive reading and retention program. Without this ability, a student is compelled to be confused by all other subjects.

FACILITIES:

1. Computer access in particular.

2. Base hospital - radiology, laboratory, in-patient care units, computer terminals at ACSC.

3. Access to aviation maintenance facilities either at Maxwell or Gunter.

4. Air Traffic Control tower, flight briefing rooms during actual pre-flight briefings. Maintenance facilities and FTD;s for high school levels.

5. Access to computer terminals, time-sharing at home with those responsible enough not to abuse the privilege and the parents understand their responsibility.

6. Warfare simulation to observe how simulation can provide training without actually endangering people and equipment needlessly.

7. Tours of simulator facilities where available.

8. I don't feel this is an Air Force responsibility.

9. I feel school facilities should be improved and equipped to do the job they were intended.

10. Hospital. BX/Commissary.

11. If there are Field Training Dets (FTD) on-station, their engine, electics, hydraulics mock-ups should be used.

SERVICES:

1. Take some of your enlisted men with knowledge of computers and set up 6 week courses for them to teach the fundamentals of computers one hour twice a week depending on grade level.

2. Library and guest speakers.

3. Access to various software programs to further enhance the learning objectives.

4. Not an AF responsibility. (I would favor more passive types of support i.e., providing speakers for relevant topics).

5. I do not feel Maxwell or any other base should have to become a high school campus.

6. Testing-an independent examiner. Curriculum development.

7. Computer programming. Helping with choosing a career with interest testing/counseling with AF people who work in those fields. Not just once a year, but 6-10 times per year.

EQUIPMENT:

1. Computers should be brought into the schools.

2. Some private schools need additional sports equipment facilities.

3. Allow someone to bring a basic computer and demonstrate.

4. Library and computer hardware.

5. Local computer stores could be helpful in organizing workshops and would most likely be happy to demonstrate their latest gadgets.

6. Computer access via modem off school/library equipment.

7. Anything that is available for "hands-...'training.

8. Not an AF responsibility.

OTHER COMMENTS:

1. We have enough welfare already. Our local AF bases must remember their primary mission is not social service; if some of these services can be offered without additional budgeted funds or on a pay-as-you-go basis, great. But please do not add some good will project that I am going to have to pay for out of my already too high taxes.

2. I feel this would be a great service to the schools of this country. Especially the private schools since we have limited funding.

3. Our schools need more emphasis on sciences and mathematics—advancement into vocational education, whether it be medicine, engineering, secretarial, or auto mechanics should not be pursued until after these basics are mastered. Schools are available for career training—university or technical.

4. Alabama public schools are not oriented toward educational excellence. Resource constraints, which you are trying to remedy, are only one manifestation of the real problem: Failure to attach sufficient importance to public school education. Treating the symptoms will not cure the disease.

5. Most questions regarding services related to the students. I feel directing more of these programs toward the teachers would help. My limited experience here has been that the teachers are not well equipped, educated, trained, exposed or whatever to pass on the necessary skills and perspectives to the students on a daily basis.

6. Recommend Maxwell/Gunter utilize co-op programs with area high schools/colleges. High school students could work a few hours a week for pay or credit. College students could work every other semester earning college

credit and getting paid at the same time. They do this at the Pentagon, so the AF already runs such a progam.

7.   The public schools in Prattville are terrible compared to other areas in the U.S.   Only an increased state/town emphasis on basics (3R's) will help. None of the "nice to have" AF assistance in this survey will help; unless the civilian public helps themselves first.   When schools in this area were desegregated, most middle/upper class whites took their children into private schools and abandoned the public schools which floated to the lowest level of competency. Improved education may only result from increased taxes.

8. Increased emphasis in public schools is essential from the earliest grades. If not available in public schools, Maxwell/Gunter could offer free lectures in "aero" science and math at the public schools for those interested. The ide is to show how science and math apply to our jobs and the necessity for knowing the basics. Show and tell teaches nothing.

9.   The actions we should take as individuals in the AF would be centered on encouraging our law makers to spend more on educational programs. This would especially apply in math, science, and technology. I don't view it as the AF's business to concentrate on the Montgomery schools or other districts which happen to be near bases.

10. I feel too much emphasis is beginning to be placed on computer training in high school.   I believe more money and effort needs to be spent on basics (Reading, Writing, Math, and Science) Computer training is not that tough when an understanding of the basics is established. Forget about computers until last year or so of high school.

11. Please keep in mind that the AF, similar to business, operates in a live environment that is applying the equipment and technology available to it's support of the mission and defense of the nation. Caution should be exercised when asking AF resources be diverted to public education programs. Enhancement/improvement of public education programs must come through demand/support of the public through increased parent involvement and tax programs to obtain the quality of education desired.